

REGIONAL INEQUALITIES IN SOCIO-ECONOMIC
DEVELOPMENT IN TONGA:
A PRELIMINARY STUDY

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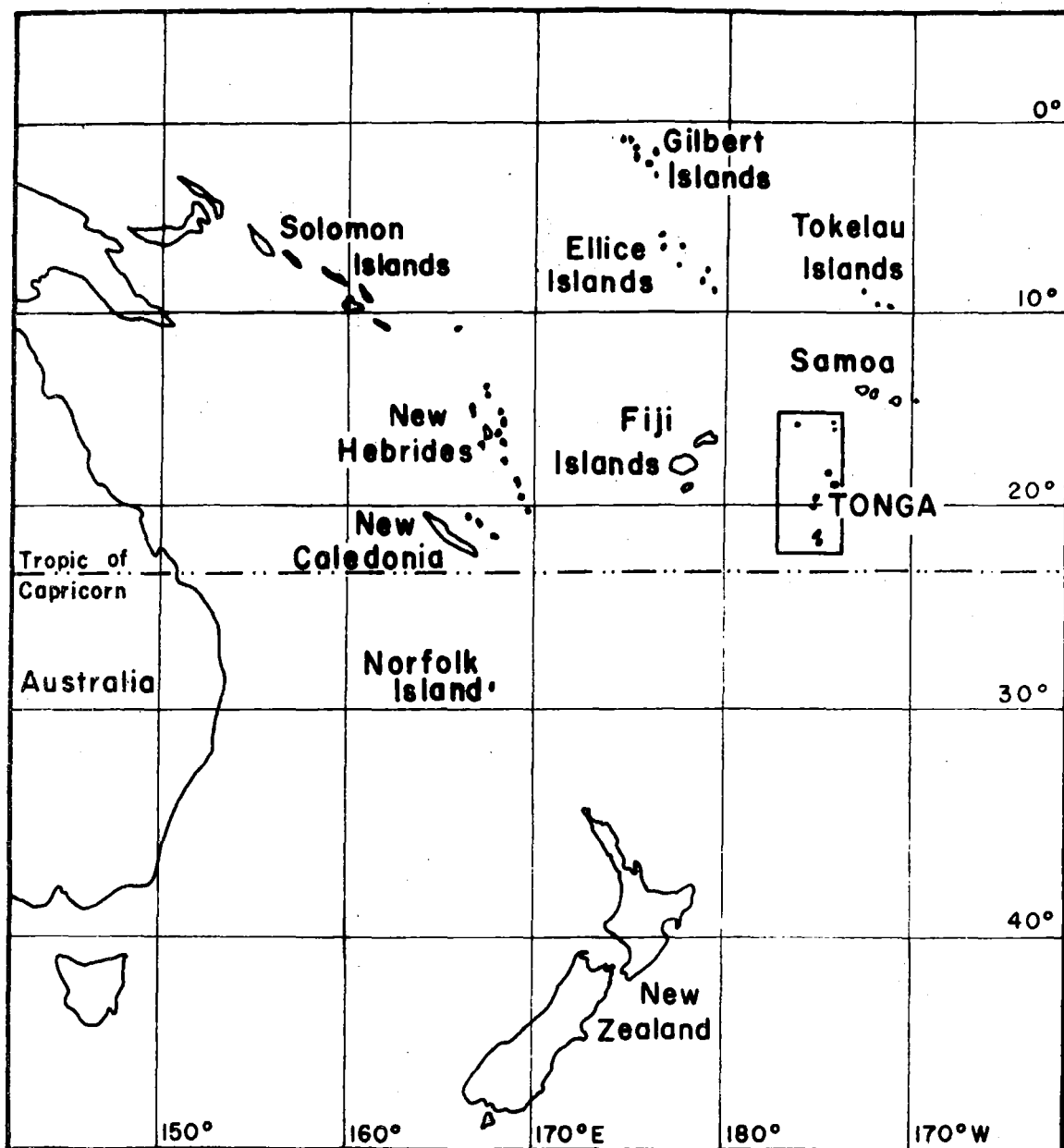


Figure 0.1: Location of Tonga in the Southwest Pacific

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ABSTRACT

This study is a preliminary investigation of regional inequalities in socio-economic development in Tonga. Its main aim is to examine, and as far as possible explain, the regional variations in development among the three main island groups of the Kingdom. The household is the unit for which various indices of socio-economic development are devised and compared. Thus the study looks at regional inequalities from the micro or "grass roots" level rather than from the more common approach through aggregate measures at the regional level.

A number of components of household level of living were selected for detailed analyses. These analyses showed that considerable inequalities do exist. The study also revealed that recent socio-economic development in Tonga has tended to concentrate where most progress has already taken place.

A number of problems were shown to have originated from regional inequalities. The overall implication is that the tendency towards polarisation of development will, by the process of circular and cumulative causation, persist, and may even increase, unless deliberate measures are taken by the Government to spread the efforts at, and the benefits of, development in a more equitable manner into the less developed regions.

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CONVENTIONS

Orthography

The system of spelling adopted in this study for Tongan words and names is that normally used within the Kingdom. Most of the Tongan words are defined when they are first introduced, and a Glossary of all such expressions used in the text is given after Appendix IV.

Abbreviations

Several abbreviations are used in the thesis. Those that are not regularly used in the literature are listed below:

- CRS - Coconut Replanting Scheme
- DHPG - Handels-und-Plentegen Gessellschaft
- DPI - First Five-year Development Plan, 1965-70
- DPII - Second Five-year Development Plan, 1970-75

Currency, weights and measures of area and distance

Unless otherwise stated all currency is in Tongan dollars (\$T) at the rate of exchange operative at the date to which the data refer. At the time of this survey (1970), \$T1.00 = \$US1.12 = \$NZ1.00. In the case of weights, measures in imperial units (1 ton = 2,240 lbs.) are used throughout. The imperial system is also used in calculating measures of area (1 sq.mile = 640 acres) and of distance (1 mile = 5,280 feet).

PREFACE AND ACKNOWLEDGEMENTS

The topic for this study arose initially out of a suggestion made by Alaric Maude who, through his research work in Tonga, saw the need for an investigation of regional inequalities in the Kingdom.

Some readers may resent the implication made throughout this study that greater material well-being is desirable. The point must be stressed, however, that the Tongan people do want higher levels of living. The aspirations of modern Tongans are directed towards 'western' goals, values and status symbols, as well as towards retaining aspects of their traditional way of life. It is not the purpose of this thesis to pass moral judgements on such desires, but rather to point to those aspirations and to indicate the changes required in order to achieve those goals.

I may appear in parts of the thesis to be unduly critical of the Government. I want to stress that I have arrived at my views only after much reflection.

In the preparation of this study, I have become indebted to a large number of organisations and people. The research on which this thesis is based was made possible by the award of a Commonwealth Scholarship which is acknowledged with gratitude. I am also grateful to the New Zealand University Grants Committee for financial assistance towards the field research in Tonga. Acknowledgement is also made of a generous grant from the South Pacific Commission towards the cost of the fieldwork. Considerable assistance from the Tongan Government is also gratefully acknowledged.

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Special acknowledgement must be made of the help received from District, town and village officers and householders who gave freely of their time to provide information sought for this thesis. Without their willing co-operation this study would not have been possible.

To the Fathers and Sisters of the Catholic Mission Station at Neiafu I owe gratitude for their hospitality. Lausi'i Helepiko, Sione Afui and Kolio Motu gave considerable assistance, especially in contacting village officers and householders. I am also greatly indebted to 'Etuata and Siosiana Langi, Sione and 'Eti Latu, Maika Kinahoi, Viliami Halapua and Sulunga Lavaka for their hospitality during my stay in Pangai.

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The drafting of the maps and diagrams was done by John Macdonald, Judy Mulholland and Patricia Oliver; and the photographic work was carried out by David Sims. The

considerable labour of typing drafts of the thesis was voluntarily done by Ethel Pitama, and Judy Robertson typed the final draft. To all these people I owe a debt of gratitude.

I am deeply indebted to my parents and family and to the most Rev. John Rodgers, without whose help I would not have had the opportunity of a university education. Lastly, but not least, I owe an immense debt to my wife 'Ainise for the constant support and encouragement she gave me during the past two years.

INTRODUCTION

Viewpoints on regional inequalities in Tonga

"Tongatapu claims ninety-nine per cent of all the social and economic development¹ that takes place in the whole of Tonga ... Regional inequalities have now become so large that people from the neglected and depressed outer islands² are migrating in ever-increasing numbers to Tongatapu in search of a better life.... Something must be done immediately about the situation before it is too late....", said a Vava'u informant discussing regional inequalities and their effects. Viewing the situation from a different angle, a group of Ha'apai men commented "... we, in the outer islands, are capable of achieving a higher level of development if only we are given the opportunities by the Pule'anga (Government) ... unfortunately, the Pule'anga does not seem to care...". Though neither geographers nor economists, these informants believed that the existing interregional disparities were undesirable and should be rectified. They also believed that the Government has so far neglected the outer islands, concentrating developmental efforts largely on Tongatapu. Given the necessary opportunities, levels of living³ in all parts of the Group could, in their view, easily be improved.

By contrast, the Government was not so very concerned

1 See Chapter 1.1 for definitions of social and economic development.

2 'Outer islands' is the term normally used to refer to all islands other than Tongatapu, the centre of Government and the site of the major urban area of the Group.

3 Level of living is defined in Chapter 2.3.

about the existing interregional disparities. Discussions which the author had with government officials indicated that, although the Authorities were aware of the existence of such disparities, many of them did not consider that they were serious enough to warrant special or urgent attention. Rightly or wrongly, the author felt that, with some exceptions, the Authorities lacked detailed knowledge of some of the major socio-economic problems facing Tonga, of the particular problems and potential of the various island groups, of the steps that should be taken to create a more equitable distribution of wealth and opportunity, and, above all, of the feelings and aspirations of the people.

The Government's lack of special concern with interregional disparities is clearly reflected in its Development Plans. Thus, in the first Development Plan which covered the period 1965-1970, there was no mention of any specific proposal aimed at removing or reducing the existing disparities among the various island groups, apart from a single sentence which read: "Government secondary school facilities will be extended to the Vava'u group of islands both to counter over-centralisation on Tongatapu and also as a means of improving teaching standards in that group" (DPI, 21). Although some regional projects were described, the local impact of these was not considered. As for the allocations of development funds, it has been estimated that "less than 10 per cent has been allocated to islands outside Tongatapu which are the most economically depressed with some 44 per cent of the population" (Walsh, 1967a, 98).

However, the second Development Plan, covering the quinquennium 1970-1975, goes further than the first Plan in recognising the growing disparity between Tongatapu and the

rest of Tonga, and the need to counteract it. One of its primary objectives is to improve communication and transport between the various islands in order to counteract the increasing primacy of Tongatapu and the town of Nuku'alofa¹ and to utilise more fully the resources of the outer islands (DP11, 35).²

Research in Tonga in recent years has pointed to the existence of considerable interregional inequalities. Discussing the question of migration from the outer islands to Tongatapu, especially to Nuku'alofa, Walsh (1964, 185) argued that one of the main causes of this movement was the relative lack of money or money-earning opportunities in the outer islands.³ Walsh (1967b, 122) has also argued that the socially and economically depressed state of the outer islands has been due largely to limited Government concern

-
- 1 It is pointed out in Chapter 6.1 that improvements in communication and transport may not necessarily counteract the increasing primacy of Tongatapu and Nuku'alofa but may instead enhance it.
 - 2 Caution should be used in interpreting this statement as an expression of official Government views, for the Plans were formulated largely by experts seconded to Tonga by the British Ministry of Overseas Development. Their execution, however, was, and is, largely in the hands of the Tongan Government which has not carried out some of the regional projects set out in the Plans. For instance, the extension of Government secondary school facilities to the Vava'u group, as proposed in the first Plan, has not yet been achieved.
 - 3 This argument contrasts with Belshaw's (1963, 20) view that the primary motivation in urban migration "is to share in a new and exciting way of life". Walsh's view seems more tenable in the Pacific context in general and in Tonga in particular. See Chapter 3.1.

for those regions. The role of the Government in the development of the various regions of Tonga is a crucial one indeed, since it is the largest employer in the country, provides public services such as post and telegraph, supervises the export of agricultural products through the Commodity Boards,¹ provides shipping services both internally and externally, provides all the banking facilities, is the largest operator in the field of building and construction and is the only significant source of capital in Tonga. There are also important socio-cultural reasons why, by and large, only the Government can initiate and coordinate the more important development projects. The Government has, for example, always believed that it alone could and should determine the rate and course of social, economic and political development of the Kingdom and undertake the necessary steps to achieve this. The people have also accepted, and still do accept, this attitude, which is reinforced by their passivity.² A large part of the explanation for the existence of such attitudes lies in the respective customary roles of the traditional leaders,³ the 'initiators', and of the commoners, the 'doers'.

In considering the causes of the differential rates of population growth in recent years in the various regions and settlements in Tonga, Maude (1965, 79-87) argued that the main cause has been internal inter-island migration, especially that towards Tongatapu. This internal mobility,

1 These are the Copra and the Produce Boards. The former is responsible for the export of copra and other coconut by-products, while the latter supervises the export of bananas and other agricultural produce.

2 See Appendix I.iii.

3 It is pointed out in Appendix I.iii that the traditional leaders are essentially the Government.

which has been, and is, of considerable magnitude, has in turn been influenced by differences in such factors as employment opportunities and other cash-earning avenues, and educational facilities. That this migration has been predominantly in the direction of Tongatapu has resulted from the possibility of obtaining an allotment or at least the use of land in that island, the opportunities for earning money by wage employment, by the sale of agricultural products, and by business, the location there of most of the secondary schools, and the comparatively well-developed amenities and the more attractive social life of the main island (Maude, 1965, 85).

Thus, some writers have pointed to the existence of differences in socio-economic development¹ among the various island groups, with Tongatapu being relatively the most advanced. Available evidence also indicated that the regional disparities had, in the eyes of many, reached a level at which it was necessary for them to move to the comparatively more developed region. All this evidence, however, originated from works in which the question of regional disparities was of only peripheral importance. As yet, there has been no attempt made to study systematically and comprehensively the nature, extent and implications of regional inequalities in socio-economic development in Tonga. Consequently, there exists a practical and relatively untouched field for research. This study, as its title implies, attempts to fill this gap.

1 For the definition of socio-economic development, see Chapter 1.1.

Purpose of study

The principal aim of this thesis has been to examine the nature and extent of regional disparities in socio-economic development in Tonga (Fig. 0.1). To achieve this it was decided to focus attention on regional variations in levels of living. As it was not possible to cover the whole of Tonga owing to limited time and resources for field-work, it was decided to concentrate on the three main island groups - Tongatapu, Ha'apai and Vava'u - leaving out the island of 'Eua and the Niuas¹ (Fig. 0.2). It was also decided to exclude non-Tongans from this survey since they make up only a very small proportion of the total population. Thus, in 1966 the non-Tongan component of the population was less than 2 per cent; and between 1956 and 1966 their numbers declined by 22 per cent. Moreover, most non-Tongans not only enjoy much higher levels of living than those attained by the Tongans but are also only temporary residents. A secondary objective of this study has been to consider the problems and implications of existing regional differences and to suggest ways in which they may be dealt with.

It will be obvious that some of the current theories of regional inequalities, especially that proposed by Myrdal (1957b), have much relevance to this study. There are also many points at which comparison can be made with other areas in the Pacific and elsewhere. While these wider aspects are discussed here, they are not pursued to any great extent. Rather, this work attempts to describe and explain the situation as regards regional inequalities in Tonga.

1 The Niuas consists of the islands of Niuatoputapu, Tafahi and Niuafu'ou.

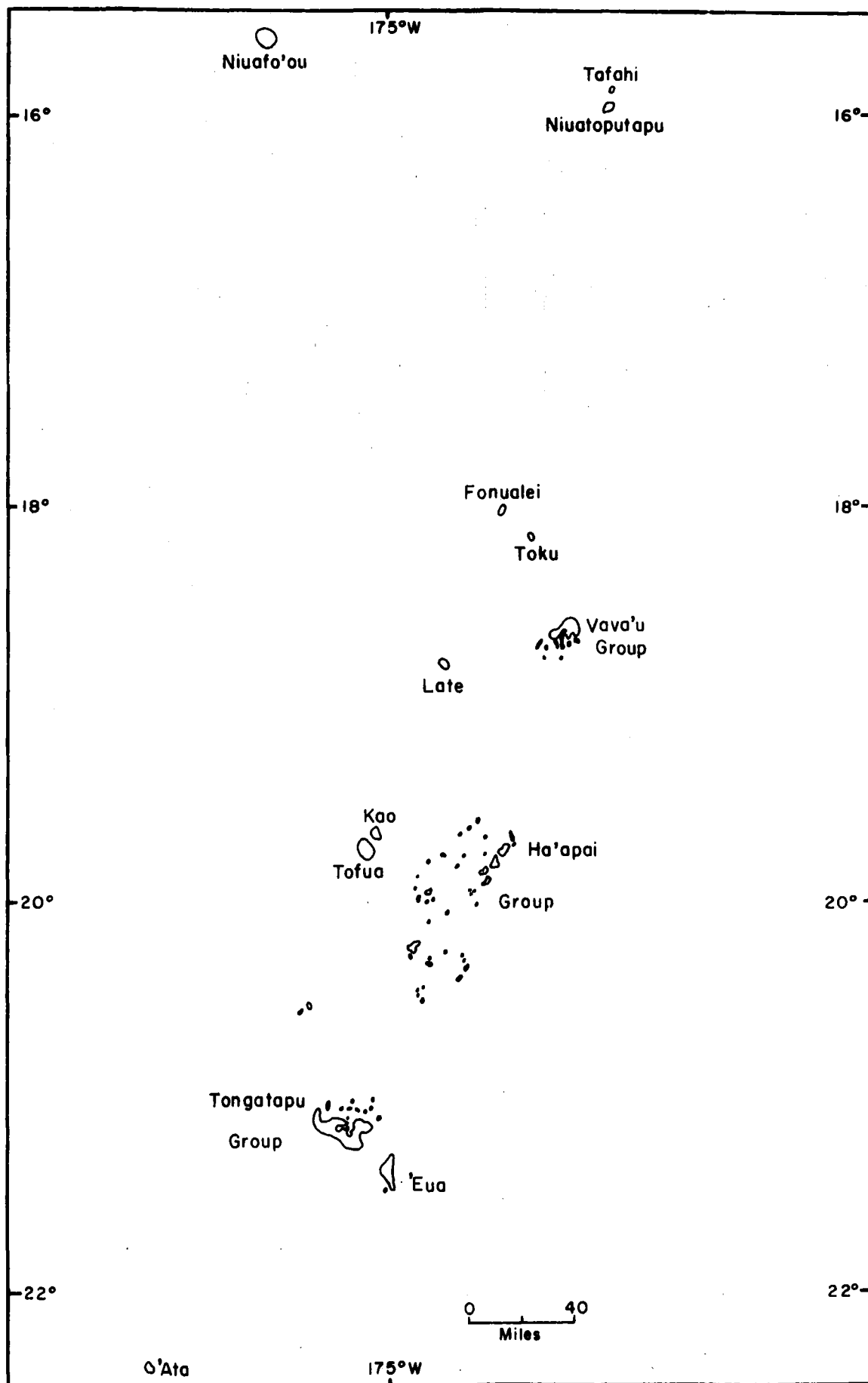


Figure 0.2: The Tonga Group

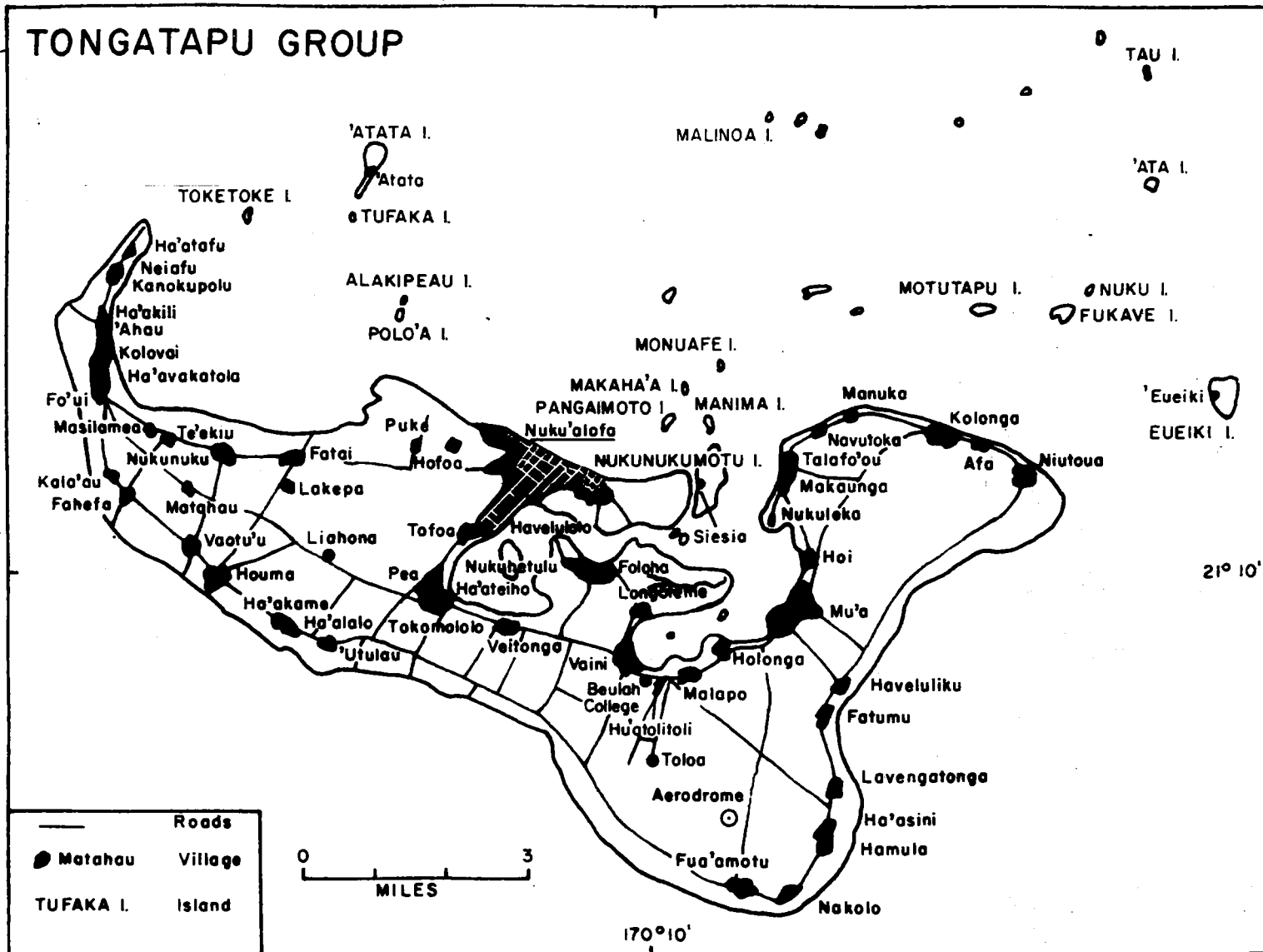


Figure 0.3: The Tongatapu Region

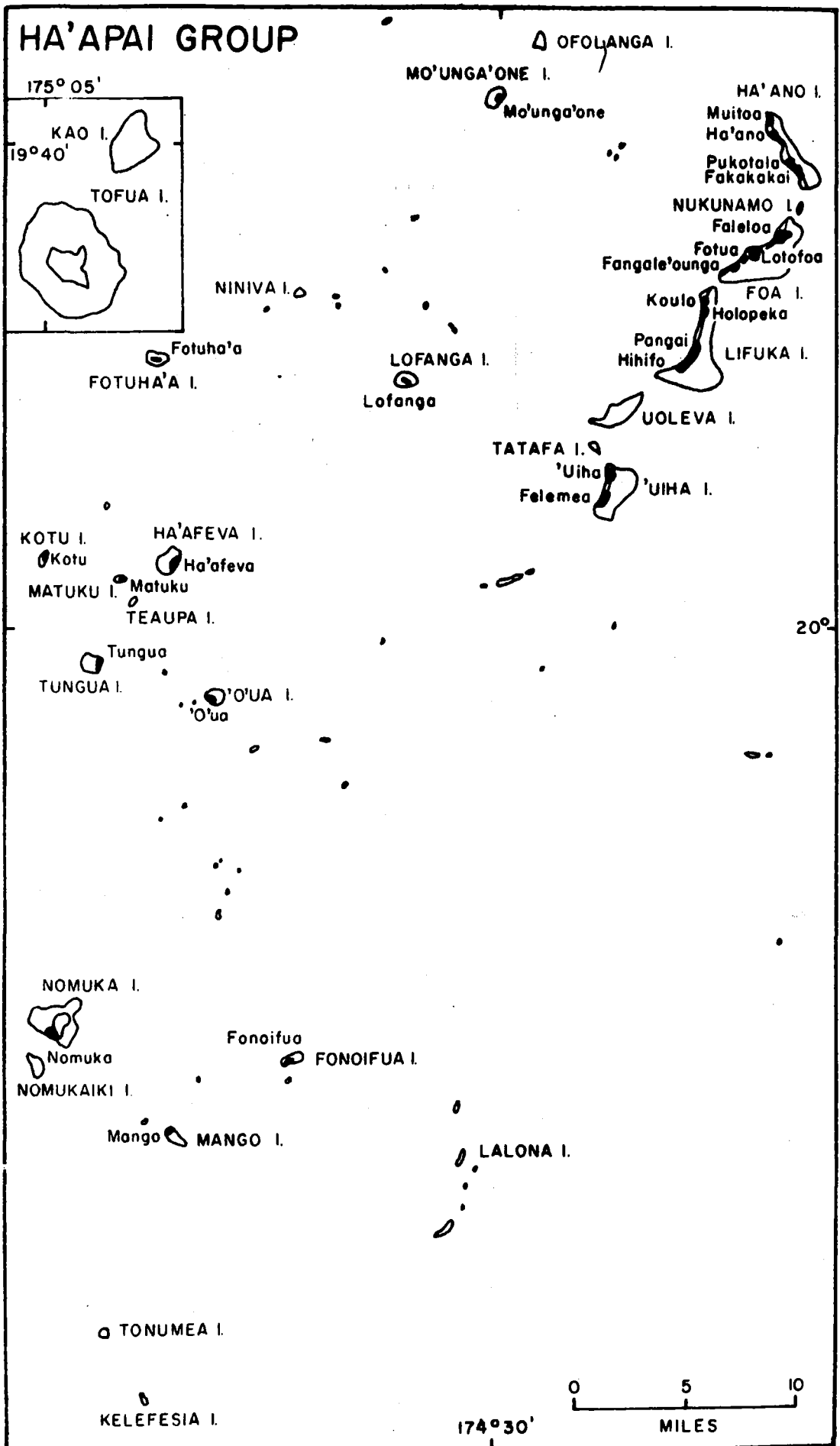


Figure 0.4: The Ha'apai Region
(Legend: Same as for Figure 0.3)

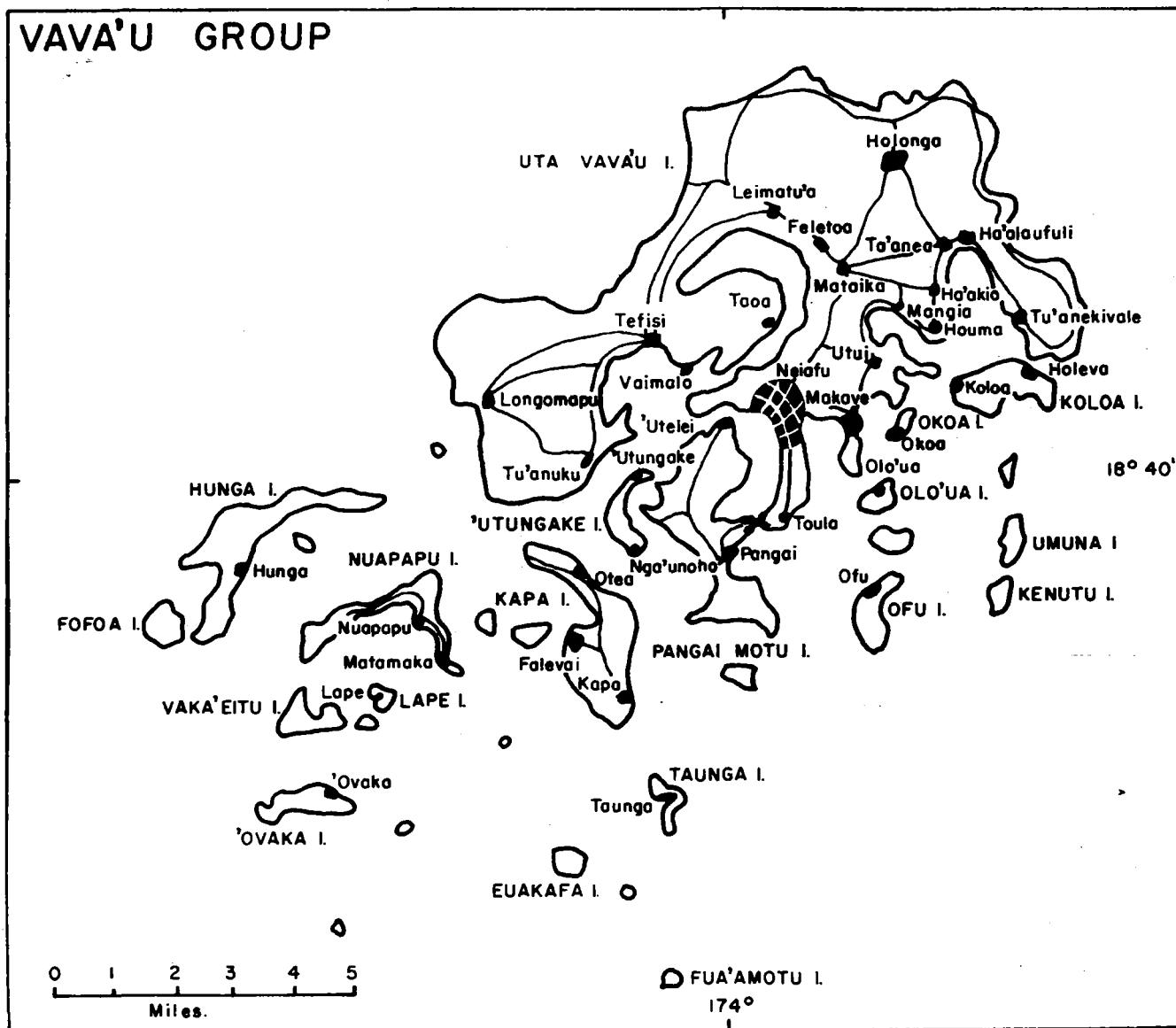


Figure 0.5: The Vava'u Region
(Legend: Same as for Figure 0.3)

**Table 0.1: Distribution, Growth and Density of Population
by Inhabited Islands - 1956, 1966**

Island	1956		1966		Intercensal change		Area (sq. miles)	Density in 1966 (per sq.mile)
	No.of persons	% of Total	No.of pers.	% of Total	No.of pers.	%		
'Eua	1,925	3.4	3,391	4.4	1,466	76.2	33.76	100
'Atata	107	9.2	146	0.2	39	36.4	0.20	730
'Eueiki	105	0.2	128	0.2	23	21.9	0.41	312
Tongatapu	31,052	54.6	47,646	61.5	16,594	53.4	99.24	484
Tongatapu Group	31,264	55.0	47,920	61.9	16,656	53.3	99.85	484
Foa	1,374	2.4	1,617	2.1	243	17.7	5.17	313
Fonoifua	72	0.1	96	0.1	24	33.3	0.15	640
Fotuha'a	167	0.3	167	0.2	0	0	0.44	380
Ha'afeva	531	0.9	533	0.7	2	0.4	0.78	683
Ha'ano	1,248	2.2	1,196	1.5	-52	-4.2	2.54	471
Kotu	154	0.3	169	0.2	15	9.7	0.13	1,300
Lifuka	3,220	5.7	3,161	4.1	-59	-1.8	4.41	717
Lofanga	317	0.6	357	0.5	40	12.6	0.56	638
Mango	119	0.2	129	0.2	10	8.4	0.25	516
Matuku	104	0.2	138	0.2	34	32.3	0.13	1,062
Mo'unga'one	278	0.5	273	0.4	-5	-1.8	0.45	607
Nomuka	753	1.3	872	1.1	119	15.8	2.06	423
'O'ua	244	0.4	248	0.3	+4	1.6	0.38	653
Tofua	-	-	123	0.2	123	-	18.04	7
Tungua	341	0.6	444	0.6	103	30.2	0.58	766
'Uiha	996	1.8	1,068	1.4	72	7.2	2.07	516
Ha'apai Group excluding Tofua	9,918	17.4	10,468	13.5	550	5.5	20.10	527
Ha'apai Group	9,918	17.4	10,591	13.7	673	6.8	38.14	278
Ofu	212	0.4	270	0.4	58	27.4	0.48	563
'Olo'ua	78	0.1	108	0.1	30	38.5	0.19	568
Okoa	144	0.3	174	0.2	30	20.8	0.13	1,338
'Ovaka	179	0.3	145	0.2	-34	-19.0	0.50	290
'Utungake	408	0.7	354	0.5	-54	-13.2	0.36	983
Hunga	370	0.7	344	0.4	-26	-7.0	1.81	190
Kapa	677	1.2	623	0.8	-54	-8.0	2.30	271
Koloa	200	0.4	246	0.3	46	23.0	0.87	283
Lape	41	0.1	47	0.1	6	14.6	0.15	313
Noapapu	349	0.6	292	0.4	-57	-16.3	1.03	283
Pangaimotu	549	1.0	531	0.7	-18	-3.3	3.42	155
Taunga	112	0.2	118	0.2	6	5.4	0.14	843
Vava'u Mainland	9,158	16.1	10,281	13.3	1,122	12.3	34.65	297
Vava'u Group	12,477	22.0	13,533	17.5	1,056	8.5	46.03	294
Niuaoputapu	1,194	2.1	1,294	1.7	100	8.4	7.28	178
Tafahi	60	0.1	101	0.1	+41	68.3	0.34	297
Niuafo'ou	-	-	599	0.8	599	-	13.41	45
Northern Islands	1,254	2.2	1,994	2.6	740	59.0	21.03	95
Kingdom of Tonga inhabited	56,838	100.0	77,429	100.0	20,591	36.2	238.81	324
All other uninhabited islands	-	-	-	-	-	-	30.09	-
TOTAL:	56,838	100.0	77,429	100.0	20,591	36.2	268.90	288

1 This is a more realistic density figure for the Ha'apai group since the greater part of the island of Tofua, comprising nearly half of the total land area of the group, is not suitable for settlement.

Source: DPII, Appendix A.2.

The regions studied

Geographically, the islands of the Kingdom of Tonga¹ fall into three main regions - Tongatapu, Ha'apai and Vava'u - aligned from south-southeast to north-northeast, with a number of outlying islands isolated to a greater or lesser degree from the main groups (Fig. 0.2). The Tongatapu region consists of the large island of Tongatapu and a few small ones (Fig. 0.3). The Ha'apai region is a scattered archipelago of some 50 islands (Fig. 0.4). Vava'u, the most northerly of the three study regions, comprises some 50 islands in close proximity to one another (Fig. 0.5). Table 0.1 contains details on the number of inhabited islands in each region, on areas, and on population distributions and densities. It can be seen that together the three regions make up approximately 80 per cent of the total land area and contained, in 1966, over 90 per cent of the total population.

Outline of study

The study is presented in three parts. Part One outlines some of the theoretical approaches to and empirical studies of the question of spatial variations in development. It also refers to examples of regional inequalities in the Pacific. Part Two, which forms the bulk of the study, describes the regional disparities in levels of living in Tonga for the period under investigation. The possible causes, problems and the implications of these disparities are then considered in Part Three; in addition, some recommendations on ways of overcoming those problems are made.

1 A brief account of the Tongan economy and society is given in Appendix I. Readers who are not familiar with Tonga are advised to read this Appendix before reading the Chapters.

P A R T O N E

REGIONAL INEQUALITIES IN DEVELOPMENT:

SOME HYPOTHESES AND FACTS

CHAPTER 1: REGIONAL INEQUALITIES IN DEVELOPMENT:

SOME GENERAL CONSIDERATIONS

One of the characteristic features of the process of socio-economic development is the generation of uneven spatial patterns. Indeed, the existence and chronic persistence of regional inequalities in development in practically all countries are now well recognised (Keeble, 1967, 257; Brookfield, 1972, 9-13). Virtually every country possesses regions which in terms of development are growing slowly, are stagnant or even retrogressive. Furthermore, these regional disparities, which stubbornly persist, are present at all levels of national development, especially in the early stages (Williamson, 1965, 3). Increasingly, theoretical studies, empirical research and political concern¹ are focusing attention on this aspect of socio-economic change in developed and, to a lesser extent as yet, underdeveloped countries.²

In order to provide a framework in which to examine regional imbalances in Tonga, this Chapter outlines some of

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- 1 Political concern with regional inequalities in underdeveloped countries is indicated by the growing list of regional programmes in many countries, including the SUDENE programme in Northeast Brazil, the 'Casa per il Mezzogiorno' programme in Southern Italy, the 'Polos de Desarrollo' programme in Spain and many others.
 - 2 In the context of this study underdeveloped countries are those with high proportions of their populations in peasant agriculture with associated low productivity levels, low per capita incomes, low levels of education and, what are usually considered, low levels of living. These various factors all result in inefficient utilisation of the resources of land, labour and capital. Leibenstein (1957, 40-41) has presented a comprehensive list of the characteristics of underdeveloped countries. The Tongan economy, and indeed most Pacific economies, is characterised by most of these features; see Belshaw (1960) for a discussion of this statement.

the theoretical approaches that have been put forward to explain the existence and persistence of regional inequalities. Special attention is given to Myrdal's (1957b) concepts of 'circular and cumulative causation', 'backwash', and 'spread effects'. Reference is also made to a number of empirical studies that have been undertaken on the topic. But before proceeding with this analysis, it is appropriate to define two very basic concepts used in this study: region and socio-economic development.

1.1: DEFINITIONS

A region

Consideration of what constitutes 'a region' and of how the national economy is to be subdivided into a system of spatial units would appear to be an essential prerequisite for any regional analysis of socio-economic phenomena. But the problem is usually a difficult one, plagued with ambiguities. Consequently, the region has become a topic of considerable interest and debate as evidenced by the voluminous literature, particularly in geography, economics, and regional science.¹

Generally speaking, the region may be regarded as an objective reality or as a mental construct (Isard, 1956, 18). The construct is necessary initially to bring order to an area that appears to be in disarray or without bounds. A spatial analyst becomes a regional analyst only when he

1 Among the more important references on the concept of the region are Whittlesey et.al.(1954), Ackerman (1953), Hartshorne (1960), Isard (1960), Perloff et.al. (1960), Papers and Proceedings of the Regional Science Association (1955- present); Journal of Regional Science (1958-present).

delimits regions in terms of a specific problem or sets of problems. Although objectivity is sought in this delimitation of regions, the drawing of boundaries remains, nevertheless, a matter of personal judgement.

However, for those researchers concerned with, say, welfare objectives of a nation, specific problems and their associated regions could lend themselves to a degree of abstraction sufficiently high that a set of "true" regions would emerge (Isard, 1956, 20-21). Significantly, Isard's set of "true" regions are to be uncovered only "ultimately (in the millenium)". Adopting a different viewpoint, the Committee of Regions of the Association of American Geographers has taken a stand on behalf of the region as a mental construct. According to Whittlesey et al. (1954, 44), "acceptance of region as an objective reality has been increasingly criticised by geographers, and it is flatly rejected in this book as being incompatible with the position that the region is a device for segregating areal features". An exception to this definition is noted in the case of the political unit, which is a functional region existing as a reality at the time the researcher encounters it, even though it, too, is a creation of the human mind.

Notwithstanding the argument proposed by the Committee on Regions of the Association of American Geographers, the distinction between the region as an objective reality and as a subjective reality may not be very important in terms of the work actually carried out, insofar as both approaches are important tools in the search for truth. The present author agrees, however, with the Committee on Regions of the Association of American Geographers that the region is basically

a tool for classification of areal features. As such, it is in sharpest focus when boundaries are demarcated by means of a single criterion; and it becomes increasingly blurred and ambiguous with the addition of criteria. But, provided that whatever concept is used in any research work or discussion is clearly spelt out, no one but the 'purist' would quarrel with it. That is, it is possible to accept a fait accompli and work with the political, administrative or statistical regions adopted by the government departments of the country concerned.

Thus, in this study, the concept of the region as an objective reality is adopted. It takes the political and administrative regions of Tongatapu, Ha'apai and Vava'u, based on historical and physical divisions, as given and examines the differences in socio-economic development among them in terms of levels of living.

Socio-economic development

There is no accepted and unequivocal definition of what is meant by socio-economic development. Indeed, the concept is more easily understood than defined (Zelinsky, 1963, 100). Ideas of increases in output of goods and services, better health, educational attainment and change are obviously involved. Most frequently it is simply equated with improved level of living. A country with an advanced level of socio-economic development is one in which large sections of the nation's population enjoy a level of living regarded as 'high' or desirable, and which produces surplus goods and services beyond the immediate needs of its population. There is no simple index that can measure level of socio-economic development, but it is possible to do so through collective

use of a variety of indices, relating to per capita income, consumption patterns, housing conditions, health, etc., the conventional indicators of level of living. Examples of countries which score highly on ~~these~~ indices and do, therefore, enjoy a high level of socio-economic development include Australia, New Zealand, the United States of America, Canada and Britain.

Implicit in the term socio-economic development is the very close interrelationship that exists between social and economic development. Indeed, many instances of development or progress cannot be readily classed under either category. On the other hand, there are equally as many cases where the two concepts are quite distinct. Social development is often briefly or partially defined as sustained improvements in housing conditions, health, and levels of education. Economic development is normally defined as cumulative increases in a country's total and per capita output and level of consumption. Socio-economic development incorporates all these aspects of change and growth.

Thus, in this study, socio-economic development is taken to mean cumulative increases in a country's, or region's, total and per capita output and level of consumption of material goods and services, which include not only food, clothing and other consumer goods as commonly understood, but also housing, and the benefits accruing from services and facilities such as those for education, health, water supply, transport and communication.¹ As Belshaw (1955, 54) has observed,

1 This is basically the definition of economic development adopted by Belshaw and Stace (1955, 59) in their report on a programme for economic development in the Cook Islands.

socio-economic development or improvement in level of living, in the context of the underdeveloped countries, is, by and large, an increase in the production and consumption of material goods. Although this definition of socio-economic development is a limited one,¹ it is, however, considered to be adequate for the purposes of this study.

It is perhaps appropriate to point out at this stage that the argument in this study for socio-economic development² is not that increased wealth will necessarily bring increased happiness or welfare to the Tongan people,³ but that they do want a greater range of choices. As Lewis (1956, 421) has aptly pointed out, "the case for economic growth is that it gives man greater control over his environment".⁴

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- 1 For more comprehensive definitions of social and economic development see, for example, Hermansen (1972, 5-13).
 - 2 For simplicity, socio-economic development and economic development are used interchangeably in the remainder of this study.
 - 3 This point has been emphasised by Crocombe (1971, 511) when he noted that "there is no necessary correlation between higher income on the one hand and better health, more personal satisfaction, greater achievement of individual or group potential, less hostility, less destructive aggression or even more consumption on the other hand". But he went on to add that the "whole emphasis of economic development" in the Pacific (and elsewhere), however, is one of "making more money".
 - 4 Attention should here be drawn to a distinction that has been made between economic development and economic growth. Logan (1972, 148), for example, has noted that conventional economic theory is concerned with the problem of maximising growth in production or income; it is not very useful in the context of economic development which has an important spatial dimension. Theories of economic growth are largely aggregative and 'spaceless' while those relating to economic development are relevant at a regional scale.

1.2: SOME HYPOTHESES AND FACTS OF REGIONAL INEQUALITIES

The general equilibrium hypothesis

One of the basic assumptions of theoretical economics is that of general equilibrium. Basically, this implies that every disturbance provokes a reaction within the system, directed to restoring a new state of equilibrium; an economic system that is not at rest is always moving towards equilibrium. Given relatively free mobility of the factors of production, "factor movements tend to bring about an equalisation of income among regions" (Harris, 1957, 191). Any differences in income or level of living must, therefore, be regarded as only temporary.

The general equilibrium theory does not, however, provide an adequate explanation in causal terms of how the facts of both international and interregional inequalities have come into existence, and of why there is a tendency for such disparities to persist and, in many cases, even increase. This inadequacy of equalisation theories or assumptions prompted economists to construct models to account for the existence and persistence of spatial inequalities in economic development (Keeble, 1967, 258).

Myrdal's concepts of circular and cumulative causation

Perhaps the most important of the models constructed to account for the existence and persistence of regional inequalities was that put forward by Myrdal during the mid-1950s (Myrdal, 1957a; 1957b). On the equalisation theories, Myrdal (1957b, 12-13) stated that

what is basically wrong with the stable equilibrium assumption as applied to social reality is the very idea that a social process follows a direction ... towards a position which in some sense or other can be described as a state of equilibrium between forces. Behind this idea is another and still more basic assumption, namely that a change will regularly call forth a reaction in the system in the form of changes which on the whole go in the opposite direction to the first change.

On the contrary, he argued that

in the normal case there is no such tendency towards automatic self-stabilisation in the social system In the normal case change does not call forth counter-vailing changes but, instead, supporting changes, which move the system in the same direction as the first change but much further. Because of such circular causation¹ a social process tends to become cumulative and often to gather speed at an accelerating rate (Myrdal, 1957b, 13).

Myrdal's hypothesis has been supported by a considerable number of writers, notably Hirschman (1958) Hicks (1959) and Richardson (1969). Richardson (1969, 3-4), for example, noted that contrary to the equality doctrine "market forces do not lead inevitably to equality in per capita incomes or to the optimal spatial allocation of resources". Indeed, market forces may even lead to heavy concentration of resources and development in a few regions.

Empirical studies have also supported Myrdal's hypothesis. Among these are those of the Economic Commission of Europe (1955), O'Connor (1963), Baer (1964), Williamson (1965), Friedmann (1966), Myrdal (1968) and Beyer (1969). Baer (1964), for instance, found, in his study of Brazil, considerable disparities in population distribution, income, industries, etc., between the northeastern and the centre-south regions. The evidence he gathered suggested "that the dynamics of Brazilian inequalities work mainly in a centripetal way", with the centre-south, the focal region, to which have moved capital,

1 Myrdal termed the process in which supporting changes amplify an initial disturbance 'circular causation'. Examples of this are 'poverty begets poverty' and 'nothing succeeds like success'.

labour, especially skilled labour, and flows of trade. Further, the disparities have been increasing. A similar trend was observed by O'Connor (1963) in Uganda, where the differences in incomes in Buganda and those in the northern and western regions have been increasing, and where economic development have shown a clear tendency to concentrate in the region where most progress has taken place.

Evolution of regional inequalities

Reasons for initial inequalities in regional development are not usually difficult to explain. The particular regions within a country where development is concentrated are usually marked out by geographical advantages, nearness to minerals, or sources of power, or to areas most suitable for specialised crops; they may also possess physical conditions favouring communications (Hicks, 1959, 162-63). Alternatively, the concentration of development in, and the continuing attraction of, a growing region may have their origin in historical accident; something was started there and not in other places, and the start was successful (Myrdal, 1957b, 26).

It is, therefore, the differences in capacity or advantages for growth that initially give rise to regional inequalities. As Hirschman (1958, 183-84) has argued, economic progress does not appear everywhere at the same time, and that once it has appeared, strong forces act to concentrate growth around the initial starting point.¹ Where the divergence in capacity for growth is large,

1 These growing points or points of concentration correspond to Perroux's (1955) 'growth poles' and Friedmann's (1966) 'core regions'. See Chapter 7.3 for a discussion of these concepts.

regional inequalities tend to persist and may even increase. Moreover, once unequal rates of growth develop, they tend to maintain the regional disparities, or may even increase them. Thus Hicks (1959, 163) argued that "as soon as industry and trade become more concentrated in a particular centre, they themselves give to that centre an advantage for further development". New firms will tend to be sited in the already growing regions, unless there are strong counteracting reasons for location elsewhere. Although the initial cause for the greater development of such regions might have been some geographical advantage, it is possible that they may lose those advantages, and yet continue to grow by 'an internal momentum' of concentration (Hirschman, 1958, 187-88).¹

Myrdal's concepts of 'backwash' and 'spread' effects

In addition to the initial inequalities in development there is the prospect that certain disequilibrating or 'backwash effects'² will accentuate the disparities: labour, and particularly skilled labour, will migrate to the more advanced region, capital flows will tend to move in the same direction, as will other resources such as entrepreneurs and foreign exchange (Myrdal, 1957b, 23-38). If interregional linkages are lacking, the effects of change and growth in the more advanced region will be limited to that region and will not offset the growing inequalities. Empirical evidence supporting Myrdal's hypothesis has been provided by Williamson (1965, 5) who wrote that

regions within nations do not typically possess equal capacity for growth, and when development begins in some of these islands, regional barriers may be too great to communicate the growth stimulus to other less

1 Also see Ullman (1958).

2 Myrdal's 'backwash' and 'spread' effects correspond to Hirschman's 'polarisation' and 'trickling-down' effects.

fortunate regions. As long as the barriers of trade and factor flows (as well as communications of technological change) persist, regional inequality will clearly increase.

Baer (1964, 269) has also pointed out that although the growth of dynamic regions can act as a centrifugal force in stimulating development in depressed regions, it can also act as a centripetal force, drawing out of the latter regions any development potential they might have possessed. This, he demonstrated, has happened in Brazil where the northeast has seriously lagged in economic growth compared with the more prosperous south.

Against the 'backwash effects' there are, however, certain centrifugal 'spread effects' of expansionary momentum from the regions of growth to other regions (Myrdal, 1957b, 31). Thus when the dynamic regions are not self-sufficient, part of the increased wealth will be spent in the outlying regions in obtaining raw materials, agricultural products and labour: a process which can lead to technical achievement and establishment of consumer goods industries in the latter regions. Perloff and Wingo (1964, 230) have demonstrated how this process operated in the spatial expansion of the United States economy. Referring specifically to the Middle Atlantic and the Great Lakes regions, they noted that the emergence of this industrial heartland, coincident with the centre of the national market, established the basic conditions for regional growth throughout the country. This was the "lever for the successive development of the newer peripheral regions; as its input requirements expanded, it reached out into the outlying areas for its resources, stimulating their growth differentially in accordance with its resource demands and the endowment of the regions" (Perloff and Wingo, 1964, 230).

Regional variations and the underdeveloped countries

While regional variations in development are present in developed and underdeveloped countries alike, the inequalities are most acute and most prevalent in the latter. In a developed country the high average level of development "is accompanied by improved transportation and communications, higher levels of education, and a more dynamic communion of ideas and values - all of which tend to strengthen the forces for the centrifugal spread of economic expansion or to remove the obstacles for its operation" (Myrdal, 1957b, 34). By contrast, in an underdeveloped country, because of the low average level of development, the spread effects are weak. As Friedmann (1966, 6) has noted in relation to regional development policy, the "central issue for the newly developing countries is, without question, the achievement of a high rate of economic growth in a national area that is often poorly articulated, poorly integrated, and whose resources are inefficiently and only partly used". Further, allowing for the free play of the market forces in an underdeveloped country, the situation becomes conducive to the creation of new regional imbalances and the widening of those which already exist. Moreover, the political situation in an underdeveloped country is such that the central government is generally very strong while the regional and local governments are weak or even absent altogether (Robock 1956, 32). These problems are further compounded by a general lack of good leadership and a characteristically weak degree of receptivity to changes, particularly in the more backward regions. Thus, while there has been, in recent decades, a trend towards greater equality between

individuals, classes and regions in the developed countries, "there has been no real parallel within the poorer countries" (Myrdal, 1957b, 6).

Williamson (1965), among others,¹ has produced empirical evidence to support the argument that poor or underdeveloped countries are characterised by increasing regional inequalities. The disequilibrating effects tend to be greater during the early stages of development, thus compounding regional inequalities. The trend for equality, on the other hand, tends to be associated with the more advanced stages of development.

Further, an attempt to temper regional inequalities in an underdeveloped country may have a more markedly adverse effect on national economic growth than in a developed country since the necessary resources and other requirements are invariably scarce. If the return to national growth through the investment of these scarce resources in the depressed region is less than that from investment of the same resources in the more developed region, the diversion of resources may retard the growth of the national economy.

Thus, regional disparities present a real problem to underdeveloped countries, many of which are now interested in finding out ways in which they can not only increase their national rates of economic growth but also distribute the benefits of that growth fairly equally over the different regions. The inequalities persist, and may even increase, yet the countries concerned do not command sufficient resources to reverse them without affecting the growth of the national economy. Moreover, the tendency, inherent in the free play

1 For example, O'Connor (1963) and Myrdal (1968).

of market forces, to create and compound regional inequalities is the more dominant the poorer the country is. Thus, under a laissez-faire situation, the following picture is most likely to emerge:

industrial production, commerce, banking, insurance, shipping, and, indeed, almost all those economic activities which in a developing economy tend to give a bigger than average return ... would cluster in certain localities and regions, leaving the rest of the country more or less in a backwater (Myrdal, 1957b, 26).

Regional inequalities and urbanisation

Closely connected with the development of regional inequalities is the process of urbanisation. Undoubtedly urbanisation has a very important role to play in socio-economic development. It is a necessary, though by no means sufficient, condition for economic development. However, to the extent that it causes economic activity to concentrate in certain areas, it is at the root of some of the most acute problems now confronting many of the under-developed nations - those of regional inequalities.

History has shown that all of the advanced economies have relied, and continue to do so, for their proper and efficient functioning upon an urban environment. Believing the growth of population in urban and industrial areas to be an inevitable cause and result of economic expansion, Hozelitz (1960, 163) stated that the cities in the under-developed countries exhibit

a spirit different from that of the countryside. They are the main force and the chief locus for the introduction of new ideas and new ways of doing things. One must look, therefore, to the cities as the crucial places in underdeveloped societies in which the adaptation of new ways, new technologies, new consumption and new social institutions is achieved.

Hozelitz's statement is borne out by facts, for throughout much of the underdeveloped world, the towns are generally the most advanced centres and their growth has had a marked and positive effect upon the economic development of the surrounding areas. Within the Pacific region itself, the town is "a vast agency for cultural change, both because it selects its population, and because the selected population is transformed" (Belshaw, 1963, 18).¹ Moreover, it is at the towns, most of which are port towns, and their immediate vicinities where development has been most marked, where social and economic facilities are concentrated, where incomes are highest, and to which people are moving in increasing numbers.

Again, according to Belshaw (1963, 22) economic growth can be stimulated by an increase in the circulation of wealth, a process to which towns can contribute by providing institutions and facilities which make it possible for goods and services to be circulated, traded for, and altered in quantity and quality. Belshaw (1963) and Brookfield with Hart (1971), among others, have stressed the significance of this element - the existence of linkages to towns - in economic growth in the Pacific.

However, with the growth of urban centres the free play of the market forces tends to cause most of the more productive forms of economic activity to group themselves in those centres, and this tendency towards regional disparity appears,

1 With respect to Tonga, Walsh (1964, 1) has correctly expressed some doubt as to whether Nuku'alofa, the port town capital, is "a vast agency for cultural change". Walsh noted that Nuku'alofa's inhabitants meet few challenges peculiar to towns as such and most rural and Tongan attitudes are carried on into the town where they require little or no modification.

from available evidence, to be a self-reinforcing and increasing function of the poverty of the country concerned. Hence, one would expect that not only would regional inequalities be much wider in poorer countries but also the poverty of the less fortunate regions within those countries would be cumulative downwards or self-reinforcing.

In the face of seemingly better socio-economic opportunities in the growing urban areas, sectors of the rural population gravitate towards them. Some of the migration may be absorbed by growing service industries, but a large proportion of the influx will not be able to be provided with jobs at all; moreover, they may need the training needed for life in the relatively more sophisticated urban environment. They will contribute to the ranks of the urban unemployed and to the economic and social difficulties of excessive urbanisation.¹ The situation becomes self-sustaining. In fact, it will, in all probability, be aggravated as others migrate into the towns in search of better opportunities, a situation that is already a reality in many of the Pacific Island towns. As Mabogunje (1968, 315-319) has demonstrated for Nigeria, cities in underdeveloped countries may be parasitic; unlike the prevailing situation in the developed countries, urban areas in the underdeveloped world are not all centres of innovation, social and economic development.

Conclusion

This Chapter has shown that much of the existing relevant literature emphasises the inevitability of unequal regional development in most countries, but especially in the underdeveloped

1 In the context of this study, excessive urbanisation occurs when the rate of migration to the urban areas greatly exceeds the rate of expansion of occupations and of proper facilities in those areas.

world. Myrdal has described the principle of circular and cumulative causation as a process tending to either concentrate development in favoured areas or depress the laggard regions even further. Advance in one region may have adverse effects on backward areas in various ways, but other forces may tend to effect a spread of positive development from the favoured region.

Regional inequalities are most acute and most widespread in the underdeveloped countries, since, because of their low levels of development, the spread effects are weak. Moreover, those countries often lack the necessary resources and conditions to achieve greater and more balanced development.

Urbanisation is one of the more important factors in the existence and development of regional inequalities. It is at and around the urban areas that greatest development generally occurs. But, although urbanisation is a necessary condition of economic development, it can also create some difficult problems especially in the underdeveloped countries.

CHAPTER 2: REGIONAL INEQUALITIES IN
DEVELOPMENT: THE PACIFIC SCENE

One of the most significant features of the spatial patterns of development in the Pacific archipelagoes is that they are, and have been, far from uniform within individual countries. A few areas or regions, especially the towns and their immediate hinterlands, have, relatively speaking, surged ahead in development, as measured by per capita incomes, employment opportunities, and social and economic facilities, while the greater parts of those countries are still lagging very much behind. These disparities lead to increased internal migration, urbanisation, and thus to even greater regional disparities.

In order to indicate the relevance of this study in a broader context of the Pacific Islands, this Chapter presents a brief account of some of the regional inequalities in a number of the Pacific countries. Some introductory consideration of the general situation in Tonga is also given. Finally, the method used in this study to examine the nature and extent of regional variations in Tonga, in 1970, is outlined.

2.1: REGIONAL INEQUALITIES IN THE PACIFIC

One of the most striking trends in the Pacific Islands in recent decades has been the rapid growth of towns. These are the centres of development or the growth poles in their

respective island groups. It is at these centres, and to a lesser extent in their hinterlands, that commercial and administrative activities, and social facilities are concentrated. As a result, they "serve as magnets, drawing in from the outer areas for permanent or temporary residence the ambitious, the adventurous, the discontented and the curious, as well as many concerned with official, mission and other business" (Keesing, 1953, 52-53). Thus recent censuses in most of the Pacific Island groups have shown very rapid rates of population growth in urban areas. Whereas average rates of natural increases in most of the Island Groups vary between 2.5 to 3.5 per cent per annum, the towns are growing at rates ranging from 5.0 to 12.0 per cent (Bedford, 1971, 260). And this increasing urbanisation is "part of the process of social change accompanying or associated with the growing centralisation of island economies" (Watters, 1970, 135). Naturally enough, the areas or regions to benefit most from the spread effects of the development occurring in the towns are those in the immediate vicinities with which the towns have regular contact.¹ By contrast, the outlying regions which make up the greater part of the country remain very much as a 'backwater'. And once the process of cumulative causation begins operating effectively, especially under laissez-faire conditions, the disparities between the centres of growth and the outlying regions grow even greater.

1 Couper (1967, xxiv) stated that "when we look at the Islands from the port towns outwards it appears that at different periods some lie in areas of 'backwash' and others in areas of 'spread effects' radiating from the port town centres of economic activities". The spread effects predominate in the areas which have regular contact with the towns and the backwash in areas where contact with the towns is spasmodic.

These regional disparities have been duly recognised by the Islanders themselves and are a basic cause of much internal migration. Commenting on these two allied features, Ward (1961a, 1) wrote that

in the last twenty years the rate of internal population movement has increased in many of the island territories of tropical Polynesia. The increasing advantages of urban areas over rural areas in providing opportunities for wage employment, education and freedom from traditional ties, combine with the excitement of urban life to make the attraction of the urban magnets stronger than ever before. As the material requirements of people increase, remote areas and the resource-poor atolls are unable to provide the means of obtaining the higher level of living which islanders desire in addition to supporting their increasing population. The drift of people from 'low' to 'high' islands and from small to large island and from rural to urban areas is a feature common to most island groups.

The Cook Islands

Observing the population movements and growth in the various islands of the Cook Islands, Ward (1961a, 3-5) noted that Rarotonga, the most economically attractive of all the islands, had gained considerably in terms of population from the less developed and more isolated islands. But migration is not merely a simple shift of people from one area to another. It normally entails, among other things, changes in the population characteristics, labour force, housing conditions and, less noticeably, changes in social and economic organisations. Thus where out-migration has left some islands or areas with a relatively large proportion of very old and very young, as in the case of Pukapuka and Nassau, there is an increased burden on the able-bodied persons. Consequently, where the imbalances in age structures are unduly large, the economic health of the community is likely to suffer.

Commenting also on internal migration in the Cook Islands, Cook (1969, 22) argued that lack of secondary schools, irregular transport and few opportunities to participate in the cash economy have been the major factors encouraging migration to Rarotonga. Believing this situation and its implications to be undesirable, he recommended that it is necessary to provide opportunities and amenities in the outer islands to increase wage employment and incomes generally. Only by directing investment and by providing markets and transport will it be feasible to make full use of the productive capacities of the outer islands. "Left to themselves, it is very likely that migration will proceed at a greater and greater rate sapping the economic viability of the islands concerned in the process" (Cook, 1969, 22).

It should be pointed out, however, that the provision of economic opportunities and facilities in the outer islands is no sure guarantee that population movement, both to Rarotonga and New Zealand, the latter especially, will be reduced. Changes in the attitudes of the inhabitants of the outer islands towards their own environment and prospects, and the life in Rarotonga and New Zealand, are also required if out-migration is to be controlled. Walsh and Trlin (1973) have drawn attention to this condition with respect to the migration of Niueans to New Zealand by emphasising the importance of the 'psychological factors' as underlying reasons in that migration.

The British Solomon Islands

In an article titled "Walkabout Long Chinatown: Aspects of Urban and Regional Development in the British Solomon Islands", Bellam (1969, 8-9) divided the Solomon Islands into

two economic 'zones': a 'region of relative growth' and 'a region of relative backwardness'. The 'region of relative growth' comprises the Western Solomons, Santa Isabel, the Russell Islands and Northern Guadalcanal, including of course Honiara, the capital of the group. The existing infrastructure is largely confined to this region, as are most of the copra plantations, the mainstay of the economy; over three-quarters of the group's total domestic exports originate in this region and it has "much the highest copra production per head, the highest Council tax, and supports the greatest density of savings bank branches" (Brookfield with Hart, 1971, 302).

The 'region of relative backwardness' comprises the South East region and bush areas of Guadalcanal, Malaita, San Cristobal and the rest of the Protectorate. Cash income here is very much less than that obtaining in the Western region and is largely obtained by temporary migration to the employment centres of the Western District, especially Honiara. This backward region has in general been neglected in most developmental efforts undertaken in the group.

The relatively greater growth of the Western region has been due largely to the colonial administrative policies which have favoured urban and expatriate-oriented development. Public expenditure heavily favours the capital, and the greater part of the group's wage packet is earned and spent there. Commenting on the extent of the existing disparity between Honiara and the rest of the Protectorate, Bellam (1969, 13) emphasised that already "this disparity exceeds a healthy level and it will widen if present trends continue". He argued that

the long-standing "backwash" effect of the modern exchange (including urban) sector drawing off the labour resources of the traditional sector seems to be entering

a more critical phase. The capital in particular is increasingly denuding the villages of their young, educated people. Already there are signs that some of the migrants are unable to find work or at least work that they find satisfying. This could lead to serious unrest unless there are radical changes in developing strategies. To date, government education policies have been designed primarily to produce a largely urban labour force. There is an urgent need for primary education to have a heavy rural emphasis. Related to this the villages need to be made into much more attractive communities.

By leaving the development process to the working out of market forces the regional and sectoral disparities have widened. To reverse this trend it is necessary for government to inject large amounts of capital into the districts.

The Fiji Islands

The phenomena of regional disparities, internal migration, and urbanisation in Fiji have been studied by Ward (1961b, 1964, 1965), and he had shown that migration is largely in the direction of the more developed regions, especially the towns. The more isolated and less developed island provinces have been losing population to such growing urban areas as Suva, Lautoka, Nadi and Vatukoula. Compared with these latter areas, many parts of Fiji are relatively poor in terms of opportunities for earning cash, for education, and for greater social intercourse; and, as Ward (1961b, 257) has observed, "these are the opportunities which more and more Fijians are seeking, and which are comparatively lacking in the depressed and more isolated island regions of Kadavu, Lau and Lomaiviti, thus forcing many of their inhabitants to move to the urban areas". Watters (1969, 182-83) has also shown that in the villages he studied there was a relatively consistent relationship between availability of cash-earning opportunities and population growth.

The development of economic activity in the group's

various islands has been very uneven, with Viti Levu being the centre of concentration. Efforts to improve the infrastructure have been devoted largely to Viti Levu, and development has consequently concentrated on that island. O'Loughlin (1956, 3) noted that the "difficulty and cost of transport around the Fiji group has been the chief contributing factor" to the spatially uneven development of the group. She appropriately added that "the development of an island economy is likely, for communication reasons, to follow this one sided pattern unless centralised action is taken to encourage development in the more backward districts".

The questions raised by O'Loughlin are given considerable attention in Fiji's current Development Plan. The Plan underlines "the need for integration of a country which is rather widely dispersed geographically ... In addition, special efforts will need to be made to bring subsistence farming into the cash economy and to improve transportation and communication between the centres and the outlying islands" (Central Planning Office, 1970, 19). Taking the appropriate steps in these directions will, the Plan argues, bring about the moderation of increasing income disparities not only between the urban and the rural areas but also between Fijians and the other racial groups.

2.2: REGIONAL INEQUALITIES IN TONGA: AN INTRODUCTION

The regional inequalities in some of the Pacific Islands groups outlined above may also be observed to a greater or lesser degree in Tonga, where Tongatapu, especially Nuku'alofa, is the region which has claimed most of the development that has taken place in recent decades. It is

in Tongatapu, the centre of commerce and administration, where average incomes are highest and where employment opportunities, cash earning avenues and social and economic facilities are concentrated. Consequently, it is to Tongatapu that much of the internal migration is directed. Though subsequent Chapters will illustrate these regional socio-economic differences in terms of household levels of living, an outline in the present Chapter of some of the major differences will provide a useful background to the following analyses.

Historical development

Available evidence suggests that regional socio-economic inequalities have always been a feature of the geography of Tonga. According to Wood (1938, 109), Tongatapu has always been "the residence of the kings and the centre of religious and social life, and modern investigation has confirmed the native tradition that Tongatapu was settled before Ha'apai and Vava'u. Also, Rogers (pers.comm., 1972) has suggested that considerable regional inequalities have always existed in Tonga, extending as far back as 2,000 years ago, and that Tongatapu has always been the main centre of the country.

Early in the nineteenth century the settlements of Nuku'alofa, Pangai and Neiafu became the centres of Wesleyan missionary activities in each island group. Gradually they also became the regional centres of government, education, trading and commercial activities; roles which they have maintained to the present day. The site value of each settlement was also a factor in their growth, for each town has a fairly central position in the group it serves and

possesses a reasonably good harbour.

At the turn of the century all the regional centres shared to a greater or lesser degree in the expansion of trading and commercial activities that were taking place as a result of Tonga's increasing involvement in world commerce. Thus the large German firm, Handels-und-Plant^{er}gen Gessellschaft (DHPG), of Pacific-wide fame, had a central office in each of three regions, and all the intermediate islands were connected by small vessels which collected copra and brought it to the depots for transshipment. Associated with the traders was the growth of small-scale manufacturing of fruit preservation, soft drinks, and foodstuffs in all these towns. Indeed, before World War I Pangai and Neiafu shared with Nuku'alofa to a relatively greater degree than they do today in the nation's trading and commercial expansion.

However, the first World War and the Depression of the late 1920s and the 1930s slackened the pace of development that was taking place in Tonga. Many of the small-scale foreign traders did not return after the War and not a few of those who did return went bankrupt during the Depression. Moreover, DHPG went into liquidation with the War. The adverse impact of these, in terms of development, was greatest in Ha'apai and Vava'u.

Although the period of World War II, when Tonga was occupied by several thousands of American and New Zealand servicemen, and the post-war years were prosperous times, trading outside Tongatapu never fully recovered. Moreover, the War years saw the development in Tongatapu of an aerodrome, of better port facilities, roads and so on, with very little such development taking place in the outer islands.

Since the War, the gulf between Tongatapu and the rest of Tonga has widened in many ways. Direct contact between Neiafu and Pangai and the outside world was, for example, more frequent and regular during the pre-war period than it has been since; in part, this has been responsible for the decline in development in Ha'apai and Vava'u. Referring to the depressed state of the northern island groups, Walsh (1967b, 122) noted that before the Second World War economic activity in the Vava'u group

was far in excess of today and the reasons for the decline cannot be explained away by falling copra prices and the hurricanes of the early 1960s. Socially - and commercially - important families have left the islands, a small fruit factory has closed down, and the main town of Neiafu apart from an impressive Copra Board building which itself is an indication of the way money has been misspent, presents a dismal picture of decay.¹

Again, since the Second World War, there has been an increasing centralisation of government and trading and commercial enterprises. Moreover, the missions, an important sector in Tongan economy, have also concentrated their activities in Tongatapu. In this connection, the location of the highly centralised government in Nuku'alofa is a very important factor. In Tonga where most capital resources are controlled by the government, ease of access to government is of great importance to entrepreneurs and businessmen. Personal contact is more effective than correspondence, especially in a society that puts great value on personal relations. Equally as important is the fact that a government is likely

1 Couper (1967, xxix) made a similar observation when he wrote that "the pretentious trading houses of Neiafu, each with its own small jetty, tell of a more prosperous era for the merchants".

to recognise most clearly and to resolve most expeditiously problems in its immediate vicinity. Further, since much of the investment undertaken is determined by the Government, the capital town, and at least part of the surrounding areas, is likely to have the best or only power supply, water supply, schools, communication facilities, and so forth. These facilities in turn attract private investment to the capital. The net result is a clustering of government services, educational and health facilities, trading and commercial enterprises, etc., in the main centre of Nuku'alofa, much to the benefit of the inhabitants of Tongatapu. Conversely, there is a marked lack of these activities and facilities outside Tongatapu.

Population growth and distribution

Some indication of the differences in population growth and distribution between the three study regions is provided in Table 2.1. As the Table shows, the proportion of the total population living in Tongatapu increased from 42.2 per cent in 1931 to 61.9 per cent in 1966 while the corresponding proportions for Ha'apai and Vava'u during the same period declined from 22.2 to 13.7 per cent and from 26.5 to 17.5 per cent respectively.¹ The population changes in the individual settlements were considerably more spectacular than those suggested by the aggregate figures in Table 2.1. This is evident from an examination of Figure 2.1 which reveals that while no Tongatapu settlement decreased in population during the 1956-66 intercensal period, 5 settlements in Ha'apai and 13 in Vava'u suffered losses.

1 The 1931 figures should be treated with caution, for McArthur (1967, 85) warned about the reliability of the 1931 and earlier census returns.

**Table 2.1: Population Distribution by Main
Regions - 1931, 1956, 1966**

Region	1931		1956		1966		Changes (%)	
	No.	%	No.	%	No.	%	1931 -56	1956 -66
Tongatapu	12,231	42.2	31,264	55.0	47,920	61.9	155.6	53.3
Ha'apai	6,410	22.2	9,918	17.4	10,591	13.7	54.7	6.8
Vava'u	7,643	26.5	12,477	22.0	13,533	17.5	63.2	8.5
Other	2,555	8.9	3,179	5.6	5,385	6.9	24.4	69.4
ALL TONGA:	28,839	100.0	56,838	100.0	77,429	100.0	97.1	36.2

Sources: 1931 figures - McArthur (1967); 1956 figures
- Tupouniua (1958) and 1966 statistics
- Fiefia (1968)

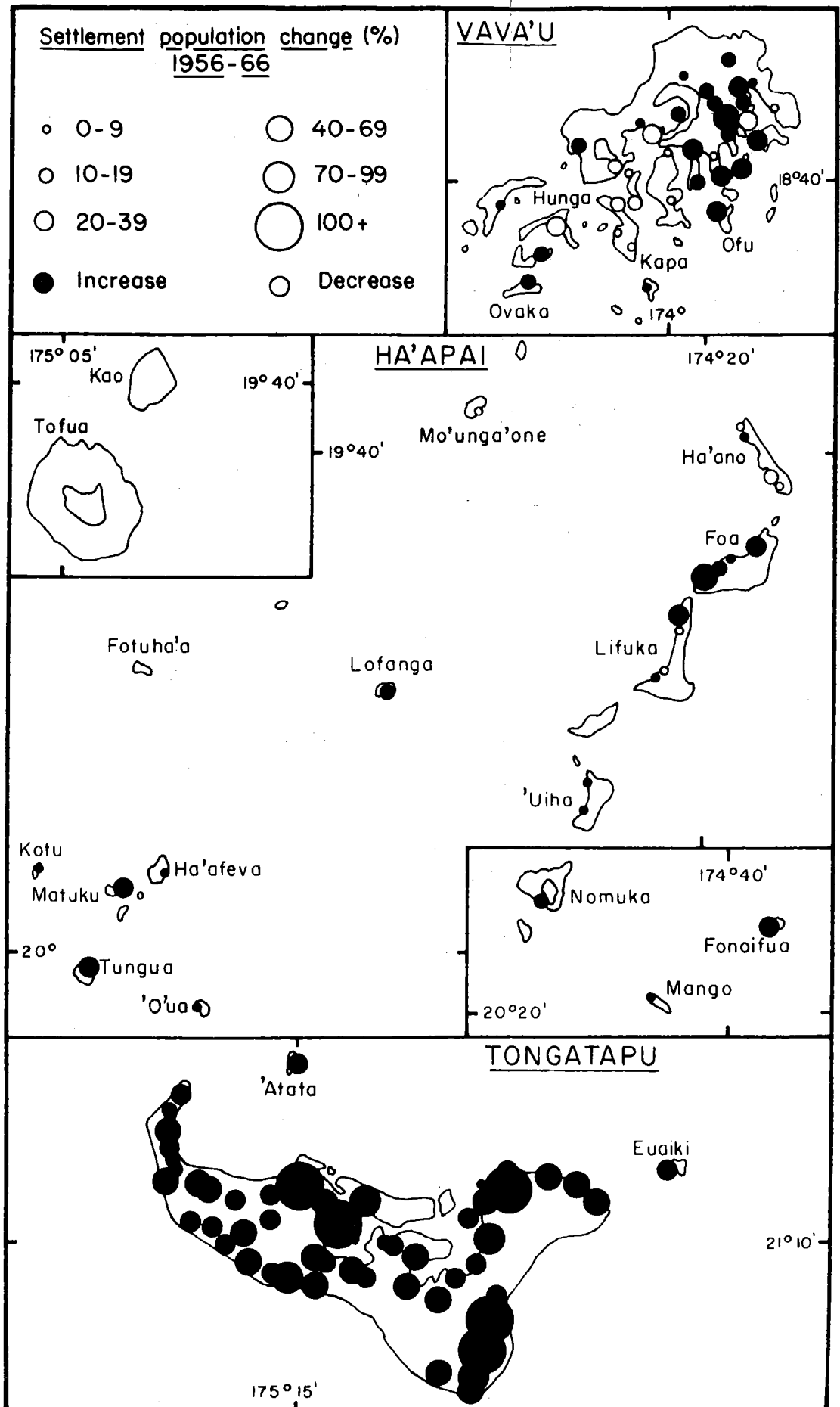


Figure 2.1; Settlement Population Change
Between 1956-66

Sources: Based on Tupouniua (1958) and Fiefia (1968)

Figure 2.1 also shows that settlements with the highest rates of increases were heavily concentrated in Tongatapu.

Another demographic indication of regional differences is given by the figures contained in Tables 2.2 and 2.3. The figures suggest considerable variations in the stability of the regional populations, with the Tongatapu population being the most stable. In 1956, for example, 90.0 per cent of people born in Tongatapu were enumerated there, while the comparable figures for Ha'apai and Vava'u were 69.5 and 80.0 per cent respectively. Ten years later, the percentage for Tongatapu had increased to 92.9 per cent whereas those for Ha'apai and Vava'u had declined to 62.0 and 70.2 per cent respectively.

Although some of the people living away from the place where they were born were undoubtedly students and temporary residents in Tongatapu, the differential rates of increase for the three regions under study, plus the fact that overseas migration has been quite insignificant,¹ suggest that there is a much higher rate of internal migration than could be explained by students and visitors (Walsh, 1969a, 7). This is supported by the fact that there is no evidence² to suggest any significant regional variation in birth and death rates. This movement which has been, and is, predominantly in the direction of Tongatapu has been stimulated by a number of socio-economic factors such as search for wage employment, the pull of the social and educational facilities

1 That is, during the period (1956-66) here considered.

2 See, for example, Maude (1965, 79-87); views of medical authorities in Tonga (pers. comm., 1971),

Table 2.2: Distribution of Population¹ According to
Percentages Born in and Outside Enumeration
Regions - 1956, 1966

Enumeration Region	Year	% Born in Region	% Born Outside Region
Tongatapu	1956	78.6	21.4
	1966	78.2	21.8
Ha'apai	1956	84.9	19.1
	1966	86.3	13.7
Vava'u	1956	81.6	18.4
	1966	78.1	12.9

1 Tongans only

Sources: Tupouniua (1958), Fiefia (1968).

Table 2.3: Distribution of Population¹ According to
Regions of Birth and Enumeration - 1956, 1966
(Percentage)

Enumeration Region	Year	Region of Birth		
		Tongatapu	Ha'apai	Vava'u
Tongatapu	1956	90.0	3.8	4.7
	1966	92.9	2.2	2.3
Ha'apai	1956	24.1	69.5	5.5
	1966	32.3	62.0	3.9
Vava'u	1956	16.5	2.6	80.1
	1966	24.9	2.9	70.2

1 Tongans only

Sources: Tupouniua (1958), Fiefia (1968).

of Tongatapu, of Nuku'alofa in particular, the push due to land pressure in certain areas of Ha'apai, and land availability in Tongatapu.

Infrastructure

The extent of regional inequalities is also indicated by variations in the development of infrastructure - transportation and communication facilities, educational and health facilities, power and water supply, industries and so on. In most components of infrastructure, Tongatapu is the most advanced and Ha'apai the least developed with Vava'u slightly ahead of Ha'apai.

Transportation and communication:

Internal transportation is mainly by sea and road. The archipelagic nature of the Kingdom means that an effective internal shipping service is vital for both the social and economic development of the country. Exports must be collected prior to shipment overseas, imports arriving in the Kingdom must be distributed and people must be able to move freely if the benefits of the market economy are to be realised by all.

Internal shipping services are maintained by a fleet of 7 government vessels and about 30 privately-owned vessels. Prior to the inauguration in January, 1971, of the fast inter-island service between the three main groups, the shipping fleet was very much inadequate to meet the Kingdom's needs. People wishing to travel between the groups often had to wait for more than a month before a boat turned up. But with the coming into operation of the inter-island ferry, the situation has greatly improved.

Within each of the Vava'u and Ha'apai groups themselves

shipping services are still inadequate. The groups' physical fragmentation into numerous islands necessitates the availability of a sufficient number of good and sizeable vessels and reasonably good landing places. Unfortunately, a considerable number of the islands in the two groups are inadequately served in these respects.

The provision of regular shipping services linking Tonga with the rest of the world is also vital to the growth and development of the Tongan economy. Nuku'alofa and Neiafu are the two ports of entry for foreign vessels with the former having the only deep-water harbour in the Kingdom. The Union Steam Ship Company operates a fortnightly service between New Zealand and Tonga via Fiji and other island ports; and the Tonga Copra Board vessel Niuvakai provides a regular service between Australia and Nuku'alofa. Copra is shipped by Bank Line vessels to European ports. An indication of how the three island groups are served by foreign-going ships is given in Table 2.5.

Details of the lengths and types of roads in the Kingdom are contained in Table 2.4. It can be seen that the country's road network is heavily concentrated in Tongatapu with 148 miles of motorable road out of a national total of 205 miles. Moreover, whereas the road network of Tongatapu spans the whole island and links up all the main settlement centres, those of Vava'u and Ha'apai are confined to the larger islands. For instance, in Ha'apai only the islands of Lifuka, Foa, and Ha'ano have roads such as those shown in Table 2.4, and in Vava'u such roads are confined to the main island of 'Uta Vava'u. In the smaller islands the network consists of unsurfaced roads and earth tracks. The number of vehicles per head of population again shows the leading position

Table 2.4: Type and Length of Roads
by Main Regions - 1970

Type	Mileage		
	Tongatapu	Ha'apai	Vava'u
Main bitumen sealed road	52	-	17
Main unsealed coral road	42	7	13
Secondary bitumen sealed road	11	-	5
Secondary unsealed coral road	43	4.5	11
TOTAL:	148	11.5	46

Source: DPPII, Table 1.3.

Table 2.5: Details Relating to Regional
Infrastructure - 1970

Detail	Tongatapu	Ha'apai	Vava'u
Road density ¹	1.5	0.3	0.9
No. vehicles ²	18.0	1.0	8.0
No. tractors ³	10.0	1.0	6.0
No. ship calls ⁴	114	-	15
No. medical workers ⁵	3.6	0.9	1.1
No. hospital beds ⁶	2.8	1.7	2.4
No. secondary schools	14	2	3

1 Road mileage per square mile of land area.

2 Per 1,000 head of population (estimated).

3 Per 10,000 head of population (estimated).

4 Foreign going ships, both Tongan and overseas.

5 Per 1,000 head of population (estimated).

6 Per 1,000 head of population (estimated).

Sources: Government departments' Annual Reports and files.

of Tongatapu (Table 2.5). The comparatively smaller number of vehicles in Ha'apai is understandable in view of the small size and fragmentation of the islands in that group.

Air Pacific operates four times weekly from Nausori (Suva) to Fua'amotu Airport which is situated 12 miles from Nuku'alofa. Internal air services between Tongatapu and Vava'u began towards the end of 1972, and proposals are included in the 1970-75 development programme for the construction of airfields in Ha'apai and 'Eua.

The existing telephone service is centred at Nuku'alofa; internal telecommunications are made possible by means of radio telephone and radio telegraph linking Nuku'alofa to the other island groups. Radio telephone and radio telegraph also link Nuku'alofa to the outside world.

Educational, health, power and water facilities:

With reference to educational, health, power and water facilities, regional conditions are again markedly different. In all these components of infrastructure Tongatapu is clearly the most advanced. Of the 19 secondary schools in Tonga, for instance, 14 are situated in Tongatapu, including all the best and most prestigious ones; only 2 and 3 are located respectively in Ha'apai and Vava'u. The Tongatapu schools are preferred over those in Ha'apai and Vava'u; consequently, the majority of the secondary school students from Ha'apai and Vava'u receive their education in Tongatapu. An indication of the extent of the regional distributions of health facilities is given by the ratios of medical workers and hospital beds to population (Table 2.5). Again, Tongatapu is shown to be the most advanced and Ha'apai the least developed.

Public electricity supply is restricted to Tongatapu. The Nuku'alofa Electric Power Board supplies electricity throughout most parts of the island. In Vava'u there is no public electricity supply system but there are a few private plants including one operated by the Copra Board and another by the Public Works Department. In Ha'apai electricity development is limited to two plants in Pangai, one of which is run by the Hospital and the other by the Catholic Mission station.

With the exception of the islands of 'Eua and Niuatoputapu, there are no fresh water springs or streams in the Kingdom. The inhabitants of the outer islands rely, therefore, on rain-catchments and wells for household water. But rain-catchments are seriously inadequate in number and are poorly maintained. Further, at many village sites the ground water is either too deep so that wells cannot be dug or bored without incurring considerable expenses, or too shallow so that the water is easily contaminated by roaming animals and traditional lavatories - particularly in wet weather. In a number of Ha'apai villages well-water is so salty that it is of little use for many domestic purposes. During the last ten years development of piped water systems, drawing water from deep wells, has been undertaken in Tongatapu so that at the time of this survey all but one village in Tongatapu had piped water systems. By contrast, outside Tongatapu only the village of Tu'anekivale (Vava'u) had such a water supply system.

Industries:

There has as yet been very little development in manufacturing and processing industries except for a

desiccated coconut factory owned and operated by the Tonga Copra Board. The factory, situated at Haveluloto,¹ was opened in 1962 and until recently was exporting only bulk desiccated coconut. But since late 1969 it has also been exporting pre-packaged desiccated coconut; and it normally employs about 300 people. A small coir factory is attached to the desiccated coconut factory but operation has been suspended pending reorganisation to produce a more competitive product.

The construction industry is dominated by the Tonga Construction Company, a subsidiary of the Tonga Copra Board. This company is responsible for most private construction of any importance and most of government building works. The Public Works Department also undertakes some construction work. The only private building firm of any significance is that run by the Church of the Latter Day Saints.

Other industries include bread baking, biscuit production, aerated water, vanilla curing, furniture making, saw-milling and so on. Many of these industries are at present only operated as cottage industries and there is ample scope for their further development. A cottage industry which is of increasing importance is the production and marketing of Tongan handicrafts, especially basketware woven from the leaves of pandanus trees and tapa-cloth. The bulk of the handicrafts are sold to visiting tourists but an increasing amount is being exported to Fiji, Australia and Hawaii. Although fishing is still a small-scale industry, the operations of Fathom Fisheries Ltd., especially its proposed cannery and other food-processing ventures, appear to have considerable potential not only for supplying the local

1 A suburb of Nuku'alofa.

market but also for export.

One of the notable features of the existing industries is that they are heavily concentrated in Nuku'alofa; and recent trends point to a continuation of this pattern. The retail sector is also concentrated in Nuku'alofa. Most of the imports are landed in Tongatapu first and from there they are subsequently transhipped to other island groups; and delays, which are not infrequent, in the transshipment of such necessities as kerosene, benzine, soap, etc., can cause considerable hardship to the inhabitants of these islands.

Urbanisation¹

While the three main towns or regional centres of Tonga-Nuku'alofa, Pangai, and Neiafu - may be regarded in some aspects, such as attitudes of the people, some features of housing, nutrition, sanitation and so on, as 'large overcrowded villages',² by virtue of their size and their social and economic functions, the regional centres cannot surely be regarded as large overcrowded villages. Each of the three towns has, for example, a larger population size, an occupational structure involving a larger proportion in non-agricultural activities,³ more social and economic

1 For a detailed treatment of this topic, see Walsh (1964).

2 Spillius (1959).

3 These are two of the three characteristics proposed by the South Pacific Commission (1962, v), in an attempt to define the term "urban" in the Pacific area, as typical of urban settlements. The third criterion is a form of local government suited to the needs of the town and different from that in the surrounding rural areas. As yet there is no system of local government in Tonga. See Chapter 7.3 for discussion on local government.

facilities than any other settlement in each respective region. Thus, in 1966, Nuku'alofa had a total population of 15,685, while the next largest settlement in Tongatapu (Mu'a) had a population of only 3,502; Pangai's¹ total population stood at 2,675 with 872 in the next largest settlement (Nomuka) in Ha'apai, and at Neiafu there were 3,593 persons, over 3 times the total population of 1,068 for Leimatu'a, the second largest settlement in Vava'u. Further, it is estimated by the present writer that about 30 per cent of the male working population in Nuku'alofa are engaged in non-agricultural activities compared with a corresponding 5 per cent for the rest of Tongatapu. Although the percentages of the male working population in Pangai and Neiafu engaged on non-agricultural pursuits are very much less than that for Nuku'alofa, they are nevertheless higher than those in any other settlement in each respective region.

Although regional centres differ in many ways from the remainder of their region, the most important disparity is between Nuku'alofa and the rest of Tonga. With about 21 per cent of the total population of Tonga in 1966, Nuku'alofa's population had grown by an annual average rate of 7.0 per cent per annum between 1956 and 1966,² while the national rate of increase for the same period was only 3.6 per cent. In comparison, the population of Neiafu increased by only 2.4 per cent annually while that of Pangai declined by 0.5 per cent.

1 Including the contiguous settlement of Hihifo.

2 The problems and implications of this high growth rate are discussed in Chapter 7.

The spectacular growth of Nuku'alofa is related in part to industrial development, but mainly to the expansion and increasing centralisation of Government, trading and commercial activities and of social facilities in Nuku'alofa. Over 75 per cent of all government services are concentrated in Nuku'alofa. In addition, government-sponsored bodies such as the Copra Board and its manufacturing industries, the Produce Board, the Tongan Construction Company, and the Pacific Navigation Company, all of which have come into existence within the past 3 decades, have been established at Nuku'alofa.¹ As Rogers (1968, 181) has observed "modern Tonga is essentially Nuku'alofa".

Moreover, most private commercial and industrial enterprises established during the past 2 to 3 decades are heavily concentrated in Nuku'alofa. There are many reasons why these activities should prefer Nuku'alofa: an expanding market; the presence of associated industries and marketing structures; reliable power and water supplies; the availability of professional and managerial skills; proximity to government and its highly centralised bureaucracy; easy internal and external communications; and greater availability of health, educational, shopping and entertainment facilities.

Currents of migration from Ha'apai and Vava'u have tended to focus largely on the capital, but never more so than in recent years; even within Tongatapu itself the predominant direction of migration is towards Nuku'alofa.

1 This trend towards increasing centralisation of government, trading and commercial activities at the main port towns has been observed by Couper (1967) to occur also in Fiji and the Gilbert and Ellice Islands Colony.

As Walsh (1970, 27) has observed, "in common with the other Pacific peoples, many Tongans are now finding that the attractions of the main island and capital town far outweigh the often declining attractions of the islands of their birth". Migration has been the main factor in the rapid growth of Nuku'alofa in recent years and its magnitude is to an important degree a measure of the expectation of job opportunities.

2.3: ANALYSIS OF REGIONAL INEQUALITIES IN TONGA

Because little relevant information is available for former years, attention is focussed on the situation in 1970. The analysis is carried out by means of the concept of level of living, for socio-economic development is, as stated in the previous Chapter, tantamount to an improvement in the average level of living.

Level of living defined

A United Nations Committee¹ defined level of living as "the actual living conditions of a people" (UN, 1954, 2).² So defined, the level of living of whatever unit of reference one cares to take, be it an individual, a household, village or country, is clearly a multi-dimensional concept. In its widest interpretation, it includes every aspect of life, embracing both the material and non-material factors; or in the economist's terminology, the economic and non-economic

1 Professor R. Firth, Professor P.M. Hansen, Mr. E.V. Hofsen, Fr. L.J. Lebret, Mr. O.A. Morais, and Dr. V.K.V.R. Rao.

2 In suggesting this definition the Committee also noted some of the problems associated with any attempt to define the term. See also Maunder (1954, 350-356) and Moser (1957, 5).

factors; and any attempt to measure or evaluate it in its entirety would constitute a task so enormous and complicated as to be impracticable. Similarly, any attempt to find a suitable single aggregative index for it would encounter formidable difficulties. Resort must be, and has been, made to what has come to be known as the pluralistic approach to the measurement of level of living. That is, level of living is the term used to denote the actual living conditions of a people, and, as such, comprises a number of components such as those listed below.

Components of level of living

The selection of the most central and pertinent components is a difficult exercise in the Tongan context where many factors militate against obtaining data with a high degree of accuracy, and where many of the components of level of living are not easily susceptible of measurement. Nevertheless, this study ventured to choose for somewhat detailed investigation some of the items that seemed to cover the more significant aspects of living conditions in Tonga. Inevitably, the ease with which data could be obtained was another important consideration, as was also the need to restrict the scope of the study to manageable proportions. The components that were finally selected for examination were (i) demographic characteristics, including migration and educational level; (ii) housing conditions; (iii) productive resources and production patterns and (iv) patterns of cash income and expenditure. These components refer very largely to the material aspects of level of living. They take no account, for example, of factors such as recreation, social security, human freedom, health, and the like.

These indexes of level of living should be regarded as measures of observation and not as yardsticks of some absolute standards. They are employed in order to enable the total situation to be judged since it is impossible to consider all of the aspects of the problems simultaneously and readily. While the indexes are variables, knowledge of the value of one index enables one to impute others, although the relationship between the variables need not be of an exact nature. Thus, in attempting to indicate what the components or indexes of level of living measure, the following points should be underlined: that the chosen components are not direct measures of the actual level of living, but only indicators of it; and that such indicators are not of the absolute degree of attainment of some external or absolute standards.

The selection of components was based largely on the author's knowledge of living conditions in Tonga and on the views of a number of local informants. A basic assumption used in this selection was that the more and better the goods and services a household had the higher the household's level of living would be. Thus, if a household's cash-income increased, that would mean an increase in the level of consumption of goods and services, and hence of material satisfaction. This assumption was made on the evidence that, as yet, Tonga's general level of material well-being is still at a relatively low level, both absolutely and in relation to felt needs. As the fieldwork progressed, it became evident that the choices were adequate for the purposes of this study. Moreover, the fieldwork also confirmed an impression which the author had prior to the commencement of the field survey: that

the average Tongan is becoming more materialistically-minded, is no longer satisfied with a society based on subsistence agriculture,¹ but wants and expects money² and 'European' goods and services such as sewing machines, bicycles, bread and butter, electric power, water and sewerage reticulation, transistors, watches and so forth.³

Whose level of living?

The measurement of regional levels of living can be approached from two directions: using regional statistical data collected by some government departments or official organisations; and carrying out surveys of villages (towns, or cities), households or individuals. For many of the indicators relevant to measuring level of living, the former is generally the more convenient and less expensive. It possesses, however, a serious drawback in that it restricts the investigator to overall rates and averages, thus providing little chance of showing distributions. Surveys, on the other hand, can be much more informative. Moreover, the smaller the unit of interest the more the research worker can learn about the levels of living of the particular units of interest. If the village, household or individual is the unit of study, field-surveys offer the most rewarding approach,

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- 1 This agrees with Finney's (1965, 325) finding relating to the inhabitants of 'A'ou'a, a small community located on the southwest coast of Tahiti. Finney observed that "even the most romantically inclined of the 'A'ou'a will admit, if questioned closely, that they really do not want to go back to a simple life of farming and fishing".
 - 2 See Chapter 5 for a discussion of the importance of money to Tongans.
 - 3 Douglas (1965, 2) has made a similar observation with respect to the Cook Islanders.

even though they are costly and time-consuming. The fact that, in Tonga, relevant regional statistical data were very limited both in depth and in breadth did detract from the comparative cost advantage of the former method, since a great deal of field-work would still have had to be carried out. As such, the survey method was certainly the more sensible one to adopt. Field-surveys were, therefore, undertaken in each of the three regions chosen for study.

As the household is the basic socio-economic unit of everyday life in Tongan society, it was decided to adopt it as the unit of study. In conformity with Tongan usage, the household, 'api', is here defined as a group of persons living, eating and largely working together or pooling their income. In general, the key to the definition of a household is communal production and consumption, for it is not uncommon to find members of a household distributed throughout two or more houses for sleeping. The notion of household adopted here follows that used in the Population Census of Tonga, being a functional rather than a formal one.

Scope and method¹

As it would have been practically impossible to survey every household in the time available, samples had to be drawn. But in order to obtain an adequate areal coverage of the whole of the studied regions, the regions were first stratified into several subregions (Fig. 2.2). Then from these a total of 267 households were drawn at random to be

1 A more detailed discussion of this aspect of the study is given in Appendix II.

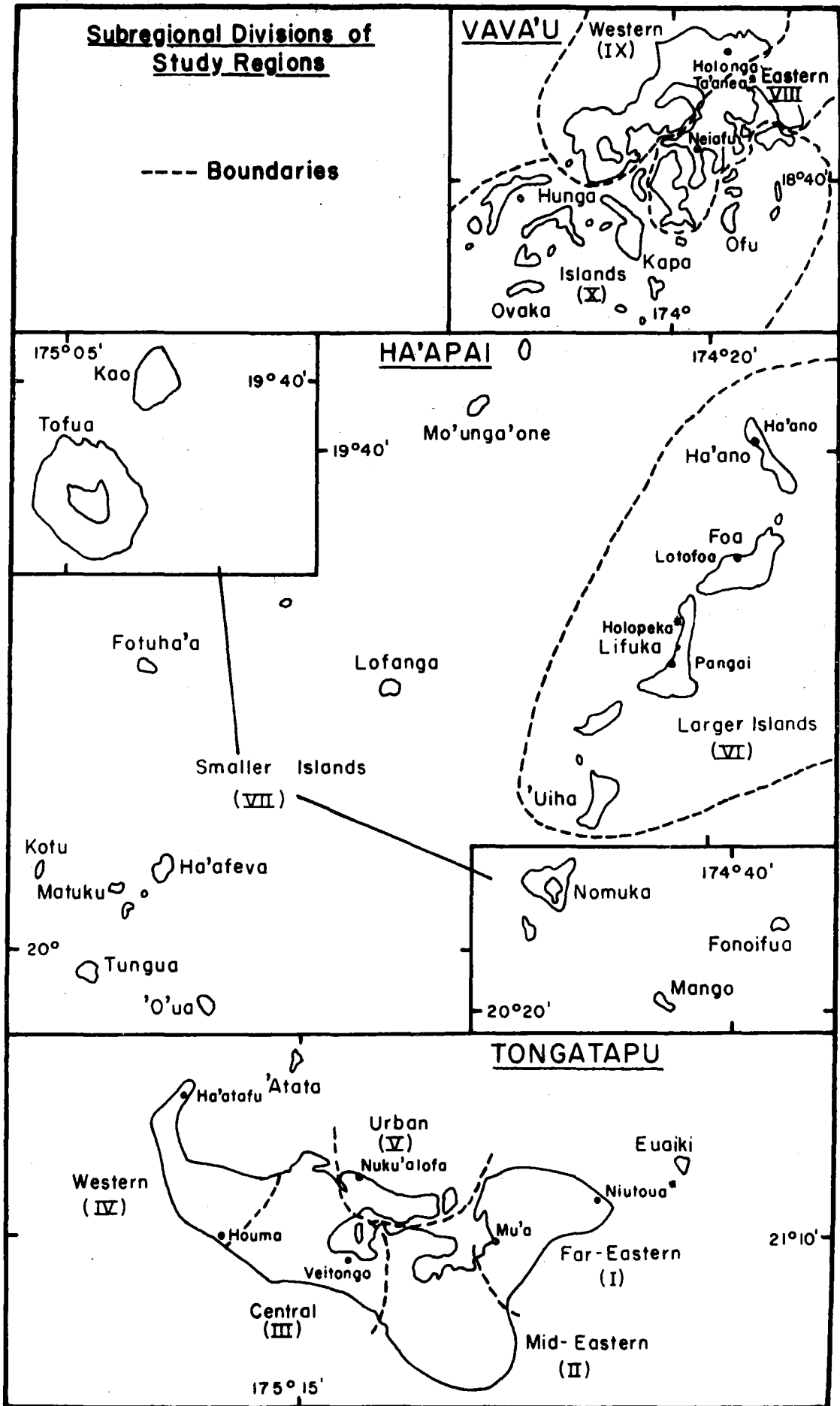


Figure 2.2: Division of Study Regions into Subregions
(* Case-study villages)

surveyed. There were 151 households in the Tongatapu sample, and 49 and 67 in the Ha'apai and Vava'u samples respectively.

Three main types of data were collected in the course of the field-work which lasted from September 1970 to June 1971. The first was information of a general nature relating to the region as a whole, such as population, land resources, production, transport and communication facilities and various other aspects of the economy, and also certain aspects of the social and political life of the region. Most of the data in this category were collected for background information. The second type, which formed the bulk of the data collected, was detailed household information collected by means of a questionnaire from the sampled households (Appendix IV). The main items of information on which details were sought included household and population characteristics, land holdings and land use, capital assets, production, household durables, and patterns of income and expenditure. The main limitation on the number and range of questions asked, indeed on the whole study, was the need to keep the questionnaire to a length commensurable with the limited research resources available. The third type of data was also household information collected by way of village and household case-studies.

Conclusion

The material presented in this Chapter has indicated that unequal regional development is quite widespread in the Pacific. Moreover, the characteristics of these regional inequalities are what one would expect from reading the literature on the subject. Development has tended to

concentrate in and around the towns, and this had led to very rapid growth in urban population, especially in recent years. The indications are that, under laissez-faire conditions, regional inequalities have tended to increase and will most likely continue to do so. Attention has been drawn to some of the implications of current regional inequalities, but apart from Fiji, very little remedial action has been taken by any of the countries concerned.

A brief introduction to the situation in Tonga showed that regional inequalities in terms of population growth and distribution, development of infrastructure and urbanisation were quite marked. For a more detailed examination of the nature and extent of regional inequalities, this study has chosen to focus attention on levels of living - the subject of the next three Chapters.

P A R T T W O

REGIONAL INEQUALITIES IN DEVELOPMENT IN

TONGA: THE SITUATION IN 1970

CHAPTER 3: SOCIAL ASPECTS OF DEVELOPMENT:

DEMOGRAPHY, EDUCATION AND HOUSING

Regional differences in demography, migration, educational level and housing conditions very often reflect fundamental disparities in regional economies. Thus, inequalities in levels of living or levels of development of regional economies invariably cause a net migration from the lagging to the growing regions, resulting in differences in population growth and distribution and in age-sex structures. Also, because of concentrations of educational facilities and higher average incomes in the more developed regions, there are invariably significant regional differences in the level of education attained and in housing conditions.

This Chapter examines regional inequalities in levels of development in terms of a number of social variables. First, demographic variables such as household size, age-sex structure and household type are considered. The nature and extent of household migration are then discussed, followed by an analysis of the educational level achieved by household adult members¹ and of the degree of exposure to mass-media of communications. Finally, housing conditions are considered.

1 In the context of this study, adult members are all those aged 15 years and over, excluding students.

3.1: DEMOGRAPHIC CHARACTERISTICS

Household size

The survey recorded an overall average of 6.4 persons per household. The actual distribution of households by size in each region is graphically presented in Figure 3.1. It can be seen that the average household size was largest in Tongatapu where it was 6.8 persons, while in Ha'apai and Vava'u it was 5.9 and 5.7 respectively.¹ The differences between these and corresponding averages from the 1966 census returns are shown in Table II.2 to be relatively small.

The regional proportions of households each with between 1 and 4 persons were fairly similar; but, beginning at 5 persons per household, the regional proportions began to differ appreciably. It can be observed, for instance, that large households consisting of 8 or more persons were proportionately more numerous in Tongatapu than in either Ha'apai or Vava'u. Whereas in Tongatapu no less than 30 per cent of the households contained 8 or more persons per household, only 13 and 16 per cent of the Ha'apai and Vava'u households respectively reached that size range. Again, while none of the Ha'apai and Vava'u households contained more than 11 persons, approximately 12 per cent of the Tongatapu households had more than 11 persons each.

The greater average household size in Tongatapu does not appear, on the basis of available evidence, to be the result

1 These are weighted averages, as are all the regional averages appearing in this study which are based on the author's data. Each of the subregional averages was weighted according to the proportion of the total regional sample households contributed by each subregion.

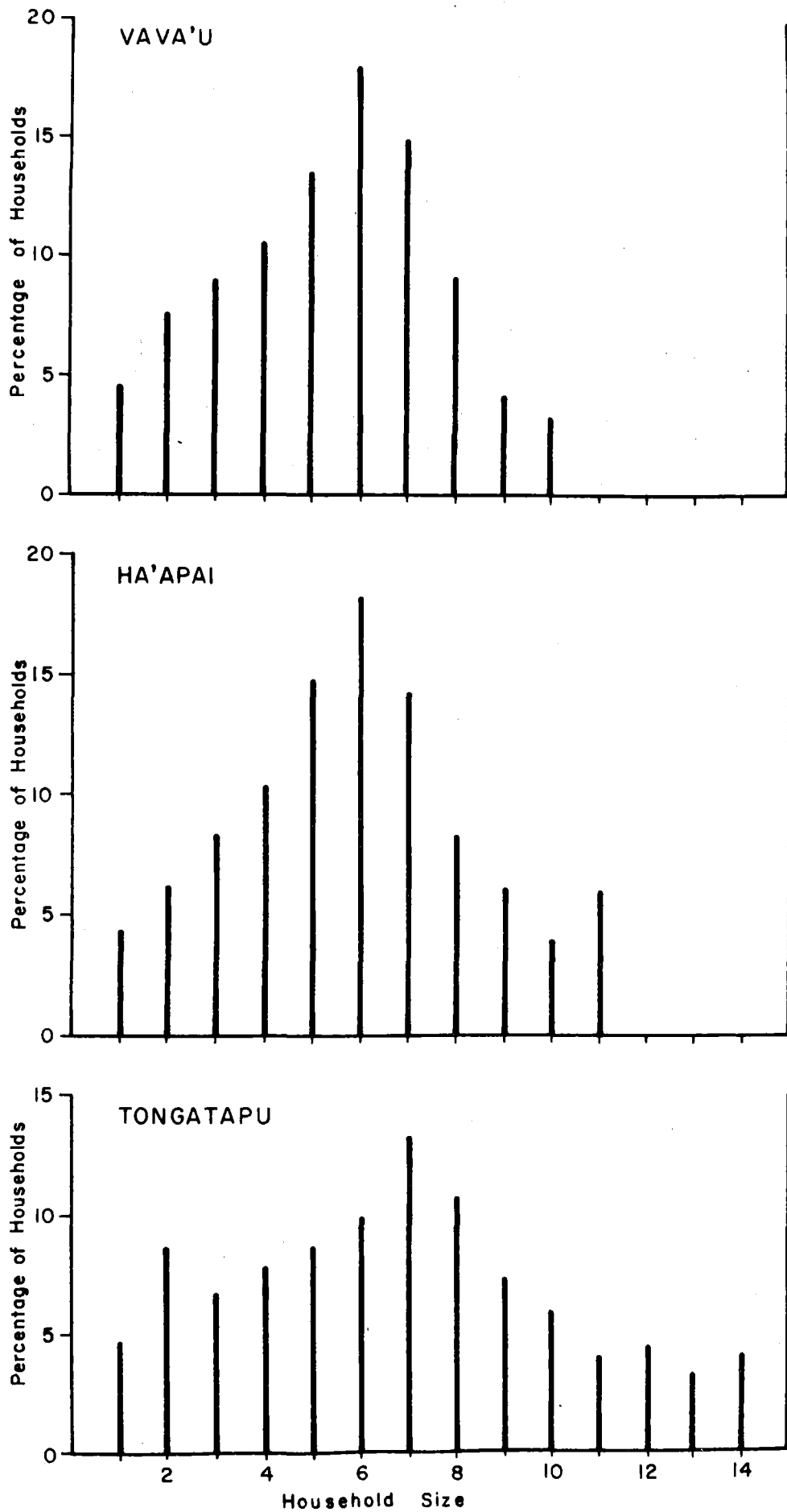


Figure 3.1: Distribution of Surveyed Households
According to Size
Source: Field-surveys (1970-71)

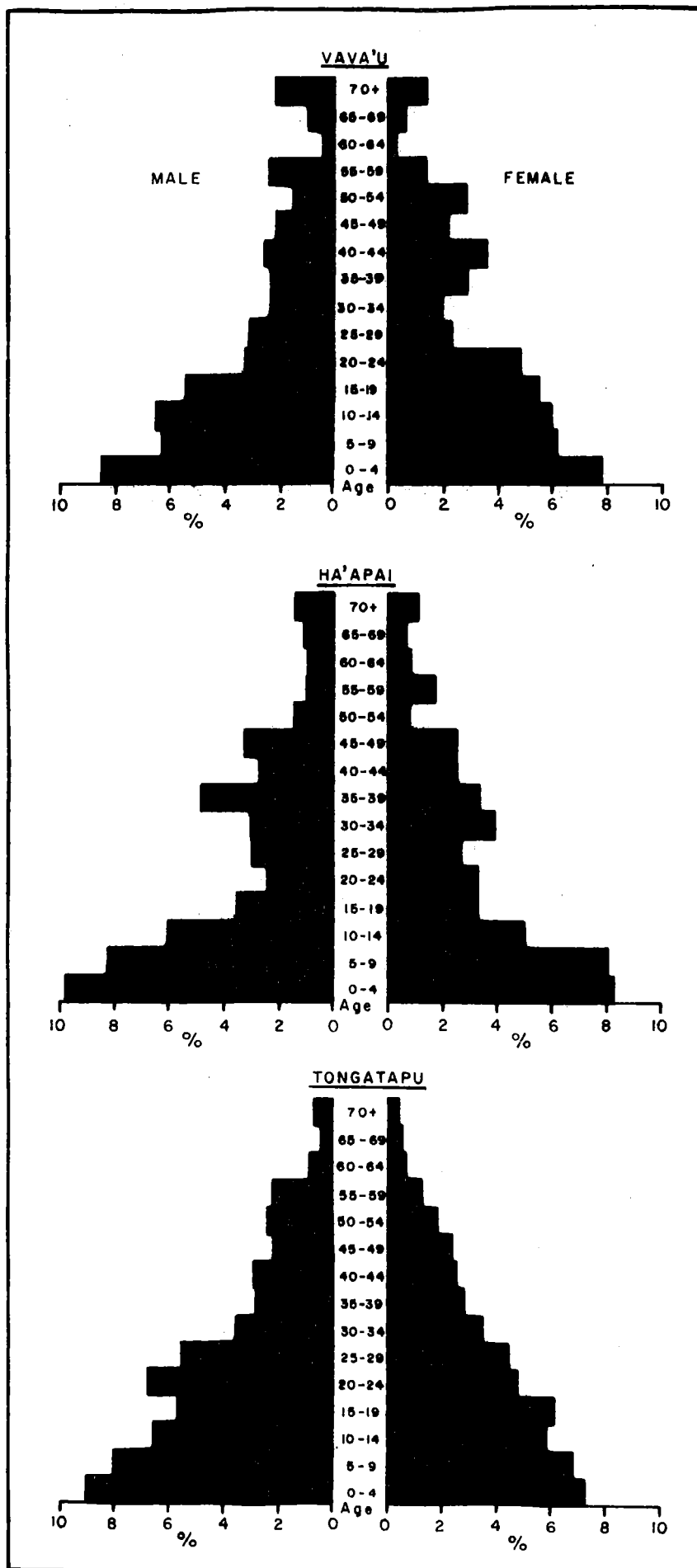


Figure 3.2: Age-sex Structures of Surveyed Populations

Source: Field-surveys (1970-71)

of greater fertility in Tongatapu, but rather a consequence of migrants from other islands or island groups,¹ notably Ha'apai and Vava'u, attaching themselves to Tongatapu households. About 75 per cent of the Tongatapu households with 11 or more persons contained at least one migrant; and these larger households tended to be more common in the Nuku'alofa area than in other parts of Tongatapu. Thus the average household size in Nuku'alofa was 7.5 persons, while in the other 4 subregions the corresponding figure was 6.8 persons,² with very little variation from one subregion to another. In Ha'apai and Vava'u there were no marked differences in household size between the various subregions.

Age-sex structure

The age-sex structures of the sample populations are depicted by the population pyramids in Figure 3.2. A feature common to all three pyramids is the broad base representing a youthful population (over half under 19 years of age) with a high growth potential. Closer examination, however, reveals an important differential characteristic. The Ha'apai and Vava'u pyramids are somewhat distorted in that, unlike the Tongatapu pyramid, they do not conform to the shape of a 'normal' population pyramid which, from a relatively broad base, gradually becomes narrower with age-group. This distortion may be partially explained by the smaller

1 The overall extent and direction of this migration has been outlined in the previous Chapter, and is also discussed in Chapter 6.2.

2 Returns from the 1966 census showed an average of 7.5 persons for Nuku'alofa and 6.9 for the rest of Tongatapu.

population numbers making up the Ha'apai and Vava'u sample totals and by the possibility of the informants giving inaccurate estimates of ages.¹ It is more likely, however, to be due to loss through out-migration from those same regions, as has been suggested by Walsh (1964, 29). That the distortion appears to be confined, in the main, to the more mobile age-groups (20-59 years) and that there were comparatively higher percentages of older people (65 years and over) than in Tongatapu tend to suggest out-migration from Ha'apai and Vava'u as a more plausible explanation of the regional variations in age-structures.

With regard to the sex composition of the surveyed household populations, it was observed that there was a slight preponderance of males over females, with 111 males for every 100 females² over the whole surveyed population. Regionally, the ratio was highest in Tongatapu where there was 131 males for every 100 females. The corresponding number of males for every 100 females in Ha'apai and Vava'u were 98 and 101 respectively.

While the overall sex ratio was comparatively high in Tongatapu, it varied significantly among the different age-groups. Sex disparity was least among those between the ages of 0-14 years and those 60 years and over; the ratio in both age-groups was close to unity. Significantly, the proportion of women was relatively low in the 15-59 age-group. While full explanation of the existence of the

1 There is, of course, an inherent weakness in methods of comparing populations based on percentages, for any exceptional divergence in any one group will tend to distort the percentage for all other groups.

2 The corresponding ratio for the whole of Tonga at the 1966 census was 104 males for every 100 females. Comparable ratios for Fiji and Western Samoa were 104 and 107 males respectively for every 100 females.

sex disparity in this particular age-group must await further research, it appears that migration into Tongatapu from the outer islands is part of the explanation. There are two reasons for this suggestion. Firstly, the sex disparity was most marked in the more mobile age-groups, 15-44 years of age; and, secondly, in Tongan society, the male is the more mobile of the two sexes.

Household types

It is probable that there is some relationship between the demographic features described above and the prevalent types of household. Table 3.1 shows the distributions of the surveyed households over 4 categories of household type. The information presented shows that in all three regions the simple family type of household was the most common. Of the extended family households, Tongatapu had, comparatively speaking, a much higher percentage (43.7 per cent) of its households in this category than either Ha'apai (28.5 per cent) or Vava'u (23.9 per cent). The other two types of households were relatively insignificant.

While extended family households were not confined to Tongatapu alone, it is possible that its relatively high incidence there resulted from migration, both intra-regional and inter-regional. Tongans, in shifting from one island or village to another, tend first to seek out relatives with whom to stay,¹ and it seems likely that the presence of a larger number of young men in Tongatapu, looking for work

1 Walsh (1970, 40) has noted the "importance of traditional, and especially kinship ties in forging a migratory chain". The importance of kinship ties to migrants in urban areas in other Pacific societies has been discussed by Nayacakalou (1963, 35) and Bedford (1971, 279).

Table 3.1: Distribution of Households¹
According to Household Types²
(Percentage)

Household Type	Tongatapu	Ha'apai	Vava'u
Single person	4.6	4.1	4.5
Spinster(s), bachelor(s)	2.0	-	3.0
Simple family	49.7	67.3	68.7
Extended family	43.7	28.5	23.9
TOTAL:	100.0	99.9 ³	100.1

- 1 In this and subsequent Tables, the results shown refer, unless otherwise stated, to the main household survey which covered 151 households in Tongatapu, and 49 and 67 households in Ha'apai and Vava'u respectively, and in which information were gathered by means of the questionnaire set out in Appendix IV.
- 2 See Appendix IV for the various types and also some definitions.
- 3 In this and subsequent analyses of survey results which have been calculated by computer and desk calculator, slight discrepancies in averages, percentages, etc., sometimes occur due to rounding.

Source: Field-surveys (App. IV, Q.1), 1970-71.

and other opportunities of earning cash, especially in Nuku'alofa, contributed to the higher percentage of extended family households and to the preponderance of males over females in that region.

Household size is related to the type of household, the extended family household tending to be somewhat larger than the simple family household. In view of this tendency it is not surprising to find that Tongatapu, with the highest percentage of extended family households, had the highest average household size. Table 3.2 shows the average household size for both the simple and extended households. It can be seen that while the average sizes of the simple family household were roughly equal in all three regions, the average size of the extended family household showed appreciable regional differences. In all three regions it is the average size of the extended family household that appears to influence the overall average. It is significant to note in this connection that just under half of the extended family households in Tongatapu were recorded in Nuku'alofa, with the remainder distributed fairly evenly throughout the other four subregions. In Ha'apai, the spatial distribution of the extended family households between the two subregions was also fairly even, but in Vava'u there was a slight preponderance in the Eastern subregion, particularly in Neiafu.

While the regional differences in the demographic features examined above are due to a number of factors, the key factor appears to be migration. It is with this question of migration, therefore, that the following sections are concerned.

Table 3.2: Average Household Size¹
According to Major Household Types

Household Type	Tongatapu	Ha'apai	Vava'u
Simple family	5.3	5.0	5.0
Extended family	9.0	7.1	6.5
ALL TYPES:	6.8	5.9	5.7

1 In terms of persons.

Source: Field-surveys (App. IV, Qs. 1 & 2) 1970-71.

Migration

The principal kinds of information on household migration or residential mobility sought in this study were: the magnitude, duration and direction of migration flows; population changes experienced by the surveyed households during the 12-month period prior to the time of the survey; and the reasons underlying the migration flows.

Magnitude of migration:

As might be expected from what has been said in Chapter 2 regarding the migration patterns in Tonga, Tongatapu contained proportionately the highest percentage (66.7) of all migrant households¹ recorded in the survey; the comparable figures for Ha'apai and Vava'u were 12.7 and 20.7 per cent respectively (Table 3.3). Although the migrant households in Ha'apai and Vava'u were evenly distributed areally throughout each region, there appeared to be a slight preference for the Nuku'alofa area by migrant householders in Tongatapu. The preference for Nuku'alofa was confined largely to those who had changed residence only during the last decade. This trend has also been observed by Walsh (1964, 123-24) who wrote that "before 1956, the main movement of population appeared to have been directed to the rural areas of Tongatapu and not especially to Nuku'alofa; since 1956 the movement would appear to have assumed a more urban character".

1 In this study, a migrant household is taken to mean a household that has changed residence from one village (town) to another. For further discussion of this, see Appendix IV. It should be noted here that none of the surveyed households had ever been involved in international migration. A few of the households, however, contained one or two members who had been overseas for a period of time.

Table 3.3: Details of Magnitude and Direction
of Household Migration

Source Region ¹	Region of Residence ²								
	Tongatapu			Ha'apai			Vava'u		
	No. ³	% ⁴	% ⁵	No.	%	%	No.	%	%
Tongatapu	15	35.7	23.8	2	25.0	3.2	3	23.1	4.8
Ha'apai	16	38.1	25.4	4	50.0	6.3	2	15.4	3.2
Vava'u	9	21.4	14.3	2	25.0	3.2	7	53.8	11.1
Other	2	4.8	3.2	-	-	-	1	7.7	1.6
TOTAL:	42	100.0	66.7	8	100.0	12.7	13	100.0	20.7

- 1 The region from which the surveyed households had made the most recent shifts in residence. The majority of cases involved only one residential relocation.
- 2 The region in which the surveyed migrant households resided at the time of the survey.
- 3 Number of migrant households.
- 4 Percentages of all migrant households surveyed in each respective region.
- 5 Percentages of all migrant households included in the survey.

Source: Field-surveys (App. IV, Q.4), 1970-1971.

A further indication of the magnitude of migration can be obtained from data relating to gain and/or loss due to migration in household population during the 12-month period prior to the survey. It was found that whereas 31 households in Tongatapu had gained at least 1 person during the stated period, only 2 households in Ha'apai and 5 in Vava'u had done so. Nineteen of the 31 households in Tongatapu that gained population received migrants from outside Tongatapu, while nearly all of the Ha'apai and Vava'u households that increased their numbers drew mainly from within their respective regions. Furthermore, while only 17 households in Tongatapu lost at least one member during the specified period, in Ha'apai and Vava'u the comparable numbers were 15 and 19 respectively.

Table 3.4 contains some details of household and population changes in the three villages¹ chosen for case studies. The details relate to the number of households, household size and total population for the years 1956, 1966 and 1970. The most significant feature of the Table is the comparatively greater increases recorded for Niutoua; while Niutoua is characterised by an increasing trend in all three aspects listed, the other two villages are marked by fluctuating trends. Thus, in Holopeka, the number of households in 1966 was 9.1 per cent less than the figure 10 years previously and household size decreased from 7.4 in 1966 to 6.9 in 1970. In Ta'anea, the household size decreased from 6.2 in 1956 to 5.8 in 1970. Both these decreases in household size were due, according to the respective 'ofisa kolo, to out-migration to Tongatapu.

1 See Figure 2.2.

Table 3.4: Details of Household and Population Changes
in Case-Study Villages - 1956, 1966, 1970

Village	1956			1966			1970		
	<u>A¹</u>	<u>B</u>	<u>C</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>A</u>	<u>B</u>	<u>C</u>
Niutoua	73	413	5.7	109 (49.3) ²	620 (50.1)	5.7	126 (15.6)	763 (23.1)	6.1
Holopeka	22	146	6.6	20 (-9.1)	147 (0.7)	7.4	23 (15.0)	158 (7.5)	6.9
Ta'anea	56	348	6.2	80 (30.0)	454 (30.5)	5.7	87 (8.8)	501 (10.4)	5.8

1 A-- No. households; B - Total population; C - Average household size.

2 Figures within brackets in the 1966 columns represent 1956-66 intercensal percentage changes; and those within brackets in the 1970 columns represent percentage changes between 1966 and 1970.

Sources: 1956 and 1966 figures from Tupouniua (1958) and Fiefia (1968) respectively; those for 1970 from field-surveys (village case-studies), 1970-71.

Direction of migration:

Information on the direction of migration flows indicates that, overall, inter-regional movement was more widespread than intra-regional mobility.¹ The extent of inter-regional migration was greatest in Tongatapu where 64.3 per cent of the migrant households recorded there had migrated from outside the region. The comparable percentages for Ha'apai and Vava'u were 50.0 and 46.2 per cent respectively.²

Considering inter-regional migration first, it can be seen that Ha'apai was the most important single source region and Tongatapu the least significant. Out-migration from Ha'apai has been predominantly in the direction of Tongatapu, as was out-migration from Vava'u. A feature of the out-migration from all three regions was the absence of any dominant source area. By contrast, there was preferred destination for a significant number of the migrant households. Thus, migrant households in Tongatapu were proportionately more numerous in the urban area of Nuku'alofa than elsewhere. No such preference, however, emerged from the areal distribution of migrant households in Ha'apai and Vava'u. This is probably due to the smaller number of migrant households that were included in the survey of those two regions rather than to an actual absence of preference for the towns of Pangai and Neiafu, where health, educational, shopping facilities, and so on of each respective region are concentrated.

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- 1 In this context, inter-regional movement is taken to mean movement between the island groups. Thus a movement between Tongatapu and Ha'apai is an inter-regional one but movement between islands or villages within say Ha'apai, is not; the latter is an intra-regional movement.
 - 2 In interpreting these percentages, the comparatively small absolute number of migrant households in Ha'apai and Vava'u should be kept in mind.

As for intra-regional migration, Table 3.3 shows that it was proportionately more important in Vava'u than in Tongatapu and Ha'apai. In all three regions, however, there was no clearly defined pattern regarding either source or destination areas of intra-regional movement.

International migration involving Tongans was, at the time of the survey, still very limited and involved mainly those going overseas for further studies and training, or working holidays. From about the second half of 1971, however, overseas migration, especially to New Zealand, increased considerably following relaxation of New Zealand's immigration regulations which gave Tongans easier access for a period not exceeding 3 months. Thus, in 1972, approximately 4,000 passports were issued. The importance of this migration in terms of overseas exchange being remitted to Tonga and in terms of general education and changes in attitudes must be considerable, although no empirical data is yet available on this subject.

Intended duration of migration:

Table 3.5 contains details indicating the proportions of household migration that were intended to be permanent or temporary.¹ It is interesting to note that for migrant households in Ha'apai and Vava'u there is a strong correlation between intra-regional migration and intended permanency, on the one hand, and between inter-regional migration and intended temporary duration on the other. The pattern for Tongatapu was characteristically different. Of the 35

1 Caution should be taken in interpreting answers summarised in Table 3.5. An intention to settle or otherwise might not always be realised in practice.

**Table 3.5: Distribution of Households According
to Intended Duration of Migration (Percentage)**

Intended	Tongatapu			Ha'apai			Vava'u		
	A ¹	B	C	A	B	C	A	B	C
Permanent	14.3	47.6	61.9	37.5	12.5	50.0	23.1	15.4	38.5
Temporary	11.9	9.5	21.4	12.5	37.5	50.0	15.4	30.8	46.2
Undecided	9.5	7.1	16.6	-	-	-	15.4	-	15.4
TOTAL:	35.7	64.2	99.9	50.0	50.0	100.0	53.9	46.2	100.1

1 A - Intraregional movement; B - Interregional mobility;
C - Total migration.

Source: Field-surveys (App. Q.4), 1970-71.

household heads who gave definite answers regarding the intended duration of their residential movements, 26 stated that their movements would be permanent while only 9 said they intended to move again. It is noteworthy that intra-regional migration in Tongatapu reveals an equal distribution of households in terms of their permanent or temporary movement. By contrast, the great majority of the households that had migrated in to the same region did intend to remain there permanently.

Reasons for movement:

Heads of the migrant households were asked for the reasons that caused them to migrate. Although most of the informants gave more than one reason for moving, they were asked to single out the most important. The results are summarised in Table 3.6. It can be seen that more than half of the informants had stated a cause for moving that could be broadly classified as economic - employment posting, better economic opportunities or land shortages. Of these three sets of factors, better opportunities were stated by the majority as being the most important, and underlined much of the movement from Ha'apai and Vava'u to Tongatapu. Accounting for the reason for his having migrated to Tongatapu, a former resident of Ha'apai said: "Tongatapu has everything in comparison with the other island groups; in Tongatapu are concentrated paid employment opportunities, openings for sales of household produce, educational and health facilities, and above all, the attention of a rather parochial government". As Rogers (1968, 4-5) has noted, current theories of internal migration "emphasises the thesis that internal migration can be best explained as a response to changing economic opportunities

Table 3.6: Distribution of Migrant Households
According to Reason for Movement
(Percentage)

Reason	Tongatapu			Ha'apai			Vava'u		
	A ¹	B	C	A	B	C	A	B	C
Employment posting	2.4	4.8	7.2	-	37.5	37.5	7.7	23.1	30.8
Economic opportunities	14.3	26.2	40.5	-	-	-	15.4	-	15.4
Land	7.1	14.3	21.4	25.0	-	25.0	15.4	15.4	30.8
Education	7.1	11.9	19.0	12.5	-	12.5	7.7	-	7.7
Family marriage, etc.	4.8	7.1	11.9	12.5	12.5	25.0	7.7	7.7	15.4
TOTAL:	35.7	64.3	100.0	50.0	50.0	100.0	53.9	46.2	100.1

1 A - Intraregional movement; B - Interregional mobility;
C - Total migration

Source: Field-surveys (App. IV, Q.4), 1970-71.

brought about by the differential impact of economic growth".¹ It is interesting to note that none of the interregional migrant households in Ha'apai and Vava'u had migrated for reason of looking for better economic opportunities. This tends to support the view, as quoted above, that as seen by the inhabitants of Ha'apai and Vava'u there were very few economic opportunities in areas outside Tongatapu, and that it was very largely in Tongatapu where better social and economic prospects existed. Of the 5 migrant households recorded in the survey of Niutoua, all were from Ha'apai and 4 of them had migrated in search of land, better economic opportunities, in addition to easier access to secondary schools.

In a survey carried out by Nayacakalou in 1957 in the village of Ha'ateiho, it was found that 44.5 per cent of household heads in that village had come from other areas, particularly from Ha'apai, and this was explained to him "in terms of the relatively central position of the village and its proximity to the capital town and to schools and other institutions situated in or around it" (Nayacakalou, 1959, 111). In this study it was found that within Tongatapu itself households who had moved in search of better economic opportunities had all migrated to Nuku'alofa where they believed the chances of obtaining paid employment were much better. In recent years, there has been an increasing number of Tongatapu people, with children attending schools in the Nuku'alofa area, who had moved there so as to avoid

1 Ullman (1954, 119) also wrote: "modern writers on migration apparently agree that, except for forced shifts, economic opportunity is its (i.e. migration's) motivating force".

the travelling expenses involved in their children's daily bus trips to and from villages to schools. It is believed by the author that this is a major consideration in some of the rural-urban movement in Tongatapu, although none of the informants whose households had moved into Nuku'alofa had said so.

A wish to possess land was another major stimulus for people moving from one settlement or region to another. In Tongatapu, movement for land reasons was from the densely populated western parts to the central and eastern areas where there was more land. Of the 6 migrant households that had moved to Tongatapu for land reasons, 4 were from the smaller islands of Ha'apai, 1 from one of the smaller islands of Vava'u and 1 from Niuatoputapu. The 2 households which had moved to Vava'u because of land had both migrated from Matuku, one of the most densely populated islands in the Ha'apai group and indeed in the whole of Tonga. Movement of this nature within Ha'apai and Vava'u was made by former inhabitants of the smaller and densely settled islands, going to seek land in the larger island of those groups.

There appeared to be other important considerations which influenced this movement. Some of the Ha'apai and Vava'u migrants in Tongatapu stated that the existence of the Nuku'alofa market and better chances of exporting produce from Tongatapu were factors that significantly influenced their decision to move. Similarly, movements within Ha'apai and Vava'u were motivated not only by land considerations but also by the existence of better transport and shipping services in the main islands of those respective groups. Walsh (1964,

185) has noted that outside Tongatapu "one of the main causes of migration is the lack of money, for even if one has land one still needs money". He argued that the main difference between various parts of the Group with respect to land and agriculture was "their unequal importance in the opportunity they afford to earn money".

Several writers¹ have observed that education is a major factor in migration in Tonga, especially in movement from the outer islands to Tongatapu where post-primary educational institutions are heavily concentrated. This observation is supported by the findings of the present study. Eight of the 10 households who had migrated for education were located in Tongatapu, with 6 of whom were in the Nuku'alofa area. Although movement of this nature was originally intended by those involved to be temporary, much of it became permanent. As one put it, "my children will have better chances of obtaining employment after their schooling if we remain here in Tongatapu".

Movement for such social reasons as marriage, or a wish to be with relatives, and so on, was the least common of the major types of mobility. The percentage of households involved in such migration was approximately the same in each region. Although movement for family or kinship reasons may not be stated often, knowledge that there are relatives and/or friends at the proposed destination, who would be prepared to look after the migrants on arrival, is very important from the point of view of facilitating migration. Somewhat surprisingly, not one single household was recorded as having moved because of the social attractions

1 For example, Walsh (1964), Maude (1965).

or the more exciting life of the urban centre. This lends support to the argument that economic reasons are the major consideration in migration. There is, however, a complicating factor which should be borne in mind in interpreting the stated reasons for movement. As indicated in Appendix I, when a respondent has to choose one from a number of possible answers, he may not necessarily select the one that actually applies to the situation concerned.

3.2: EDUCATION

Formal education

One of the main aims of all Tongan parents is to give their children a chance to obtain a good education. The major reason underlying this desire for a good education which, unfortunately, is largely of an academic nature, and divorced from the local conditions and needs,¹ is the fact that it is one of few avenues in Tonga for upward social and economic mobility. As Walsh (1969a, 4-5) has observed, "education is held in very high esteem in Tonga for it is the only way to obtain the kind of employment by which one may raise oneself on the social [and economic, it should be added] scale and thus improve that status of one's family. In a status-conscious society, education provides the only means of upward social mobility for commoners".

Educational data collected on the surveyed populations showed that in the three regions all children aged 6-12 years

1 Vocational training and agricultural education are considered second best and for the failures.

old were attending school. This is an illustration of what happens when education is compulsory¹ and is avidly desired by parents for their children. This universal attendance, mostly at primary level, was facilitated by the fact that the vast majority of the villages had or were within easy reach of at least one primary school. Moreover, primary education was relatively inexpensive.

Statistics on school attendance of those aged 15-19 years² or more present a vastly different picture from the universal attendance characteristic of those in the 6-12 age-group. The proportions of all those in the older age-groups who were still attending school were not only relatively low but also showed marked regional variations. The proportion was highest in Tongatapu with 14.1 per cent followed by Vava'u with 9.6 per cent and then Ha'apai with 7.2 per cent. Considering the 'high esteem' with which education is regarded in Tonga, the percentages are rather low. However, viewed against the high expenses of post-primary education³ and the

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- 1 The Education Act of 1927, which is still in force, requires that all children attend school between the ages of 6 and 14 years, with the provision that the child who completes class 6, the highest at the primary level, before the age of 14 years be exempted.
 - 2 Nineteen years is the average age at which the majority of Tongan students complete their secondary education. It is not uncommon, however, to find young men and women still attending secondary school or training college in their early twenties (21, 22 and 23 years).
 - 3 The average cost to parents of secondary education for one student for a year is about \$50. The conflict between the desire for children to be at school, on the one hand, and the cash available to each household, on the other, was illustrated most vividly by the way in which the most intelligent child would attend, but not his brothers nor sisters once they have completed the compulsory stage; and by the way relatives banded together to pay the expenses of a pupil at a senior school or overseas. Thus, the fact that there was a considerable proportion of boys and girls in each of the three regions who left school before the proper final stage largely reflects not a negative attitude towards education but rather an inability to pay the resultant expenses.

low average level of household cash income,¹ the low percentages are understandable. These two related factors partly explain the higher percentages in Tongatapu since households there were, as is shown in Chapter 5, financially better off than their counterparts in the other two regions. But most importantly perhaps, the post-primary institutions were heavily concentrated in Tongatapu; a concentration which automatically imposed a further disadvantage, because of travelling expenses, on those in Ha'apai and Vava'u who would otherwise send their children to secondary school in Tongatapu.

Table 3.7 sets out details on the educational achievement of the adult population. It can be seen that overall only a very small percentage of adults in all three regions received no formal education at all. The great majority of the adult population received at least 6 years of primary education. It can also be seen that the adult populations of Ha'apai and Vava'u attained proportionately fewer years and lower stages of schooling than the corresponding population of Tongatapu. Only a small proportion of the regional adult populations received any special training after leaving school. Most of those who did either were apprenticed at some government department or attended the teachers' training college. It should be noted that not only did Tongatapu claim the largest proportion in this category but also that of the 16 people in Ha'apai and Vava'u who went beyond the secondary level, half of them were temporary residents only, having been posted there from Tongatapu.

1 See Chapter 5.

Table 3.7: Level of Formal Education Achieved
by Adult Household Members

Level of Education	Tongatapu	Ha'apai	Vava'u
	<u>%¹</u>	<u>%</u>	<u>%</u>
Without education	2.2	9.0	7.5
Primary education	97.8	91.2	92.5
Completed primary education	90.0	75.2	24.4
Secondary education	80.0	57.5	55.0
Completed secondary education	45.8	33.6	30.6
Beyond secondary education	8.9	5.3	6.3

1 Percentage of total adult population surveyed in each respective region.

Source: Field-surveys (App. IV, Q.4), 1970-71.

The survey recorded a total of 10 adults who received part of their general education in an overseas country - 4 in Fiji, 4 in New Zealand, and 2 in Australia. Seven of these were residents of Tongatapu, 2 of Ha'apai and 1 of Vava'u. All of these were sent overseas by the Government and they were all civil servants at the time of the survey, working mainly in teaching and clerical jobs.

Exposure to mass-media of communications

As a society becomes more 'westernised', access to and possession of information takes on added importance. Among the sources of information, the mass-media play an important role particularly in dissemination of daily news and information relating to matters involved in earning a livelihood.

Analysis of answers relating to mass-media of communications showed that while 73 per cent of all households in Tongatapu read a newspaper at least once a week, mostly the local weekly paper,¹ only 8 per cent and 13 per cent of the households in Ha'apai and Vava'u respectively were regular newspaper readers. Every issue of the local weekly paper was sold throughout the whole of Tongatapu, but its sales in Ha'apai and Vava'u were confined mainly to the towns of Pangai and Neiafu. Moreover, 12 per cent of the households in Tongatapu, mostly in the Nuku'alofa area, also read overseas newspapers from time to time. The local paper reported largely on local affairs and did not contain much that would materially assist the average household in its efforts to earn a living. There was, for example, little

1 The Chronicle, or Kalonikali in Tongan, a government sponsored paper published in both English and Tongan.

attention devoted to matters on farming, fishing and other traditional productive activities to make up for lack of available literature on such activities. Whether many in the outer islands would read newspapers or follow national or international news is conjectural, but the opportunity to do so was limited. The net result was a scarcity of information which in turn might contribute to poverty of other kinds.

Possession of transistor radios appeared to be regarded by most Tongans as a necessity. Analysis of the relevant data showed that the majority of households in all three regions owned a transistor radio (Table 3.12). Even those without transistor radios managed by visiting the neighbours to listen to the evening news and other programmes several days of the week. As with the weekly newspaper, these locally transmitted radio programmes devoted little time to matters relating to farming, fishing, building, etc., things that are really relevant to the everyday life of the average Tongan and which can help in improving levels of living.

Most of the films shown were commercial films, and very few of them were shown outside Tongatapu. In Ha'apai films were shown about once or less a month in Pangai, and in Vava'u about once a week in Neiafu. By contrast, Nuku'alofa had several theatres showing films several times a week, and most villages in Tongatapu had film shows at least once a fortnight.

Although no special attempt was made in the household survey to evaluate the general ability of the household heads interviewed, personal observations made by the present writer tended to suggest that, generally speaking, the Tongatapu informants were more knowledgeable than those in Ha'apai

and Vava'u. Further, the Tongatapu informants seemed to be more aware of what was happening both within and outside Tonga than those in the outer islands.

3.3: HOUSING CONDITIONS

In Tonga, as elsewhere, the kind of house a household lives in is generally a revealing index of that household's wealth and level of living. But housing conditions, in its usual broad sense, is not independent of related amenities such as water supply, sewerage and lighting facilities, furniture, household durables such as food cupboards, irons, radios, and so on. These items add to the quality of a house.

Thus, in this study, housing¹ was investigated with reference to such aspects as the types of house,² including out-buildings such as the kitchen, bath-house, and latrines, in terms of both building materials and quality; and the presence or otherwise of related amenities such as water and electricity supply and of certain household durables.

1 Although the 1956 and 1966 Population Census obtained information on housing, such information is, as far as this study is concerned, inadequate in several respects. It refers to house types in terms of building materials only, irrespective of condition or quality; it gives no attention to other buildings such as kitchen, bath-house and the latrine; and it takes no account of household amenities and durables. In the words of the 1956 Census Officer, "... the information in this Report with respect to housing does not give anything like an adequate picture of the situation" (Tupouniua, 1958, 38).

2 In the context of this study, houses and dwellings both refer to buildings used as living quarters, and out-buildings to kitchens, bath-houses and toilets (latrines) which are detached from the living quarters.

House types¹

Although the types of houses in Tonga exhibit considerable diversity, it was possible to classify them, on the basis of building materials into three broad types which were considered adequate for the purposes of this study. The three broad house types were: 'traditional' houses, made of thatched roofs and walls; 'semi-traditional' houses, constructed partly of thatched roofs (or walls) and partly of wooden walls (or corrugated iron); and 'European' houses, consisting entirely of wooden, brick or concrete walls and corrugated iron roofings. Because of considerable variations in quality, it was decided that each of these three categories be further classified into two sub-divisions - the superior and inferior types. These different types and the variations within each particular type are indicated by the examples shown in Plate 1.

Of the three types of houses, the European house is the one regarded by the Tongans as the best, and it is the desire of every Tongan to own such a house. There are several reasons for this. A timber/brick and iron house is stronger and more durable than a traditional fale - the walls and roof of which need renewing every three or four years; it is less damp and it brings the household greater prestige. Moreover, iron-roofing is very desirable as rain is the only source of good quality and soft drinking and washing water in most parts of Tonga. However, timber, brick and corrugated iron are expensive. But given the necessary

1 Tongan house types have been described and analysed fairly comprehensively by Koch (1955, 173-200), Kennedy (1958, 169-72), Walsh (1964, 75-108), Tupouniua (1958), and Fiefia (1968).



Traditional Houses



Semi-traditional Houses



European Houses

Plate 1: Some Examples of House Types

income the more durable materials are preferred (Walsh, 1964, 83).

Semi-traditional houses represent, as it were, the transitional stage between traditional and European house types. A household with a semi-traditional house is generally one with some cash but sufficient only to purchase part of the materials required for a European house. Such a house may be regarded as representing those in the middle-class cash income bracket. The traditional Tongan fale is made of a wooden-pole frame with a thatched roof and walls. The traditional house type is the lot of those with relatively little cash income, just as the other two types of houses are those of households with higher levels of cash income. It should be pointed out, however, that these correlations do not always hold. It is not uncommon, for example, to find cases where the reverse is true, although most of those households are in the low income bracket. It should also be pointed out that there is a danger of indiscriminately equating European houses with good quality housing, on the one hand, and traditional houses with poor quality, on the other; a number of European and semi-traditional houses are inferior to traditional houses of moderate quality.

Traditional houses

Details of the regional distributions of households according to types of dwellings are set out in Table 3.8. As the Table shows the proportions of households living in traditional fale was highest in Ha'apai, where nearly one-half of all dwellings were of this type. The corresponding proportion in Tongatapu was just under one-third,

**Table 3.8: Distribution of Households According
to House Types¹
(Percentage)**

House Type	Tongatapu	Ha'apai	Vava'u
<u>Traditional:</u>			
Superior	13.2	16.3	11.9
Inferior	19.2	28.6	16.4
Sub-Total:	32.4	44.9	28.3
<u>Semi-traditional:</u>			
Superior	10.6	8.2	9.0
Inferior	15.2	20.4	17.9
Sub-total:	25.8	28.6	26.9
<u>European:</u>			
Superior	9.3	4.1	4.5
Inferior	32.5	22.4	40.3
Sub-total:	41.8	26.5	44.8
TOTAL:	100.0	100.0	100.0

1 In all three regions, owner-occupier housing was the commonest form of house occupation. The renting of residences by Tongans was, and is, very limited.

Source: Field-surveys (App. IV, Q.19), 1970-71.

while Vava'u had the lowest figure with a little over one-quarter. Although there were few significant variations between regions in the construction and size of the fale, there were some noticeable variations in the condition. The survey results show that overall Tongatapu had a slightly larger percentage of its traditional dwellings in the superior category than either Ha'apai or Vava'u. It was in Ha'apai, however, in the villages of Koulo and Fonoifua, that the best traditional fale were observed in the course of the survey. On the whole, however, poor housing conditions were the rule. Thus, in each of the three regions, the percentage of traditional houses of inferior quality was higher than that of superior quality.

There were 18 houses of the traditional type, 6 in each region, that were selected for slightly more detailed study, and the results are shown in Table 3.9. It can be seen that the average size of the houses was largest in Vava'u and smallest in Ha'apai. There appeared to be no indication of overcrowding except in a couple of households in Tongatapu which had 9 members each with an average floor space of approximately 20 square feet per person. In all 3 regions the houses were one-roomed with most curtained-off at either extremity to make them 'three-roomed' houses. More than half of the houses in Ha'apai and Vava'u were lined, mostly with tapa-cloth, but also with brown-paper and newspaper. As to the average age of the houses, it was highest in Ha'apai and least in Vava'u. But in spite of the older average age of the Ha'apai houses, their average condition surpassed those of the houses in Vava'u and Tongatapu with that of those in the latter region being relatively the worst.

Table 3.9: Some Characteristics of the Three House
Types¹

Characteristic	Tongatapu			Ha'apai			Vava'u		
	A ²	B	C	A	B	C	A	B	C
Average no. of persons	8	6	7	6	6	5	5	6	7
Average size (sq.ft.)	241	360	1034	223	242	640	251	287	815
Average no. of rooms	1	2	4	1	1	2	1	2	3
Percentage of houses 'wall-papered' ³	33	50	67	67	50	17	50	33	33
Average no. of doors	2	2	4	2	2	3	2	2	3
Average no. of windows	-	4	6	-	2	4	-	3	4
Average age (years)	7	6	10	9	6	11	6	5	16
Average income range	130- 249	250- 399	400- 700	100- 199	200- 299	300- 700	100- 249	250- 349	350- 900

1 The details in the Table were obtained from 6 houses from each region, 2 from each of the three types.

2 A - Traditional house type; B - Semi-traditional house type; and C - European house.

3 That is, inside walls were lined or covered with tapa-cloth or newspapers.

Source: Field-surveys (case-studies), 1970-71.

Semi-traditional houses

Referring to Table 3.8 again, it can be seen that the regional distributions of households with semi-traditional dwellings show no appreciable differences. Slightly over one-quarter of all the dwellings in each region were of the semi-traditional type, and, like the traditional houses, the majority of these were of inferior condition. These in general gave the appearance of 'waiting' to be pulled down or to be converted to a European house as cash becomes available.

In Ha'apai and Vava'u there was a preponderance of iron-roof with thatched walls over thatched roof with wooden walls. Informants in these two regions stated that the need to obtain rain-water for domestic purposes was a factor that weighed heavily in their decisions as whether to first purchase wall materials or corrugated iron for roofing when available cash was sufficient to purchase only some of the required housing materials. Most frequently the latter alternative was the one taken.

Table 3.9 shows that for the characteristics listed the semi-traditional house was slightly better in Tongatapu than in the other two regions. For example, it had a larger floor space and a greater number of windows. In each region the income range of households with semi-traditional houses was intermediate between that of those with traditional and European type houses.

European houses

As already defined, these houses are built of wooden, brick or concrete walls with corrugated iron roofings. Most of them are rectangular in shape and are raised from the

ground on concrete piles 2 to 4 feet high. Thus, the living space, most often from 2 to 4 rooms, is safe from the dampness of the ground to which the traditional and semi-traditional houses are often subjected. In quality these houses range from the average New Zealand dwellings to the inferior New Zealand backyard sheds or garages.

Of the European type of houses, Vava'u had proportionately the highest percentage (44.8 per cent) and Ha'apai the lowest (26.5 per cent). Kennedy (1958, 61) and Maude (1965, 173) have suggested that Vava'u's greater need for rain-water catchment was a factor contributing to its having a comparatively greater percentage of European houses than Tongatapu and Ha'apai. Maude added that this higher percentage was also related to that group's higher per capita income which was derived mainly from copra.

Although Vava'u had proportionately the greater number of houses of the European type, it also claimed the largest share of the inferior houses in that category, due largely to the fact that houses there were much older than their counterparts in the other two regions. Not unexpectedly the European type of houses in Tongatapu were generally better than those of the same type in Ha'apai and Vava'u. About one-quarter of the European houses in Tongatapu, all of which were located in Nuku'alofa, were of superior quality, a percentage which is more than double the comparable figure for both Ha'apai and Vava'u. It is worth noting here that all the European dwellings of superior quality in Tongatapu had inside flush toilets, inside kitchens and bath-rooms, and were each equipped with a reticulated water system, while only one-half of the equivalent ones in Ha'apai and Vava'u were so equipped. It is also worth noting that the majority of the superior European houses in Ha'apai and Vava'u were government houses

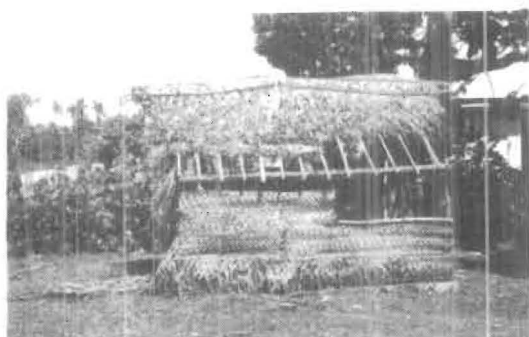
and not private ones such as were the majority of such houses in Tongatapu.

The information contained in Table 3.9 shows that in most respects the European type of houses in Tongatapu were superior to those in Ha'apai and Vava'u. The Tongatapu houses, for example, were larger, had more rooms, and were better ventilated in having more doors and windows. The correlation between European type of houses and higher income level is clearly shown.

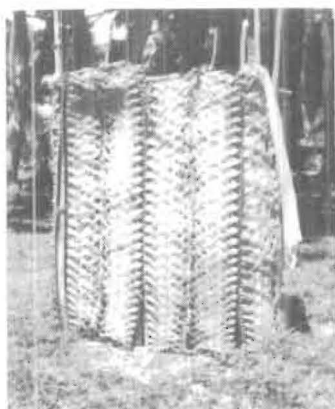
Outbuildings

The great majority of Tongan households surveyed had detached kitchens, peito, normally used as dining rooms, and detached bath-houses, fale kaukau, while a few also had storage sheds, feleoko. The toilets, fale vao, were also separated from the house. They took the form of pit latrines some yards from the living house (see Plate 2).

These outbuildings were characteristically poorly-constructed and unclean. Of the three kinds of outbuildings, it was the latrines that most needed urgent improvement. A great many of them lacked proper shelter, were of the dry type and thus provided good breeding grounds for flies. As for the kitchens, they contained few cooking utensils and the simple equipment for preparing locally produced food; tools and farm products were often stored there too. The cooking was usually done in the kitchen on open wood fires placed on the earth floor. Kerosene stoves are becoming more popular in Tongatapu, especially in the Nuku'alofa subregion where firewood is rather scarce and is becoming an expensive item.



Kitchens



Bath-houses



Toilets

Plate 2: Some Examples of Outbuildings

Distribution of the surveyed households according to the type of outbuildings they had is given in Table 3.10. Briefly, the Table shows that on average the Tongatapu households were better off than their counterparts in Ha'apai and Vava'u, for not only did they have proportionately better quality outbuildings but more of them had such buildings. The Ha'apai households were in the worst position in this respect.

Household amenities

Supplies of good quality water for domestic purposes, drinking in particular, have always been one of the most pressing problems facing the vast majority of Tongan households. Households have had to rely on ground wells and concrete cisterns for water supply. But in a number of villages in Tongatapu and Vava'u the ground water level was too deep for villagers to have wells, and where there were wells they were usually open and so shallow as to be easily polluted, especially in times of heavy rain. Also in a number of the low coral islands of Ha'apai, well water was too salty. As for cisterns, they were invariably insufficient in number, and poorly constructed and maintained. During the last few years these deficiencies have been considerably improved in Tongatapu due mainly to the combined efforts of the Tonga Water Board, UNICEF, and the villagers themselves. At the time of this survey, all but one of the Tongatapu villages had a deep ground-well, fitted with a wind-mill, supplying the villages with water from taps situated at strategic points within the village. Thus every village household was within easy reach of a relatively good water supply for a rental fee of approximately 20 cents a month for every

**Table 3.10: Distribution of Households According
to Types and Quality of Outbuildings
(Percentage)**

Outbuilding Type	Tongatapu		Ha'apai		Vava'u	
	A ¹	B	A	B	A	B
<u>Kitchen:</u>						
Traditional	4.0	53.6	4.1	59.2	4.5	56.7
Semi-traditional	2.6	19.2	2.0	10.2	4.5	16.4
European	7.9	6.0	4.1	8.2	3.0	4.5
No kitchen	-	6.6	-	12.2	-	10.4
<u>Bath-house:</u>						
Traditional	6.6	33.1	2.0	51.0	4.5	58.2
Semi-traditional	7.9	33.8	4.1	24.5	4.5	19.4
European	7.9	6.0	4.1	6.1	3.0	4.5
No bath-house	-	4.6	-	8.1	-	6.0
<u>Toilet:</u>						
Traditional	-	18.5	-	20.4	6.0	23.8
Semi-traditional	7.2	49.7	-	57.1	7.5	46.3
European	-	11.3	4.1	6.1	4.5	6.0
No toilet	-	5.3	-	12.2	-	6.0

1 A - Superior quality; B - Inferior quality.

Source: Field surveys (App. IV, Q.19), 1970-71.

adult male over the age of 16 years in each household. The situation in the urban area of Nuku'alofa was slightly different in that there were no public taps from which all households could obtain water for a monthly rental fee. To obtain tap water, Nuku'alofa households had to pay for some of the piping materials required to get water into their 'api and for the water according to the amount consumed.

Outside Tongatapu, only the village of Tu'anekivale in Vava'u had a water supply system like that in the Tongatapu villages, the remainder having to depend entirely on wells and concrete water tanks. The construction of the water supply facility at Tu'anekivale was made possible by the initiative, leadership, and influence of 'Alo 'Eva, a locally-born medical practitioner. He organised numerous village fund-collections, the purchase of the necessary equipment, and the construction of the water system which began operating in 1965. Similarly, under the initiative and direction of Fr. Callet, a Roman Catholic priest, the villagers of Leimatu'a had been digging a well for several months and by late 1970 reached ground water at a depth of 180 feet. The exact method for drawing up water from this well had not been decided upon because of lack of funds, but Fr. Callet hoped to obtain some aid from the Government for the completion of the enterprise.

The distribution of households according to water facilities are outlined in Table 3.11. The regional variations with respect to wells were slight, but those relating to water tanks and piped water were comparatively significant, with the Tongatapu households being much better off than those in Ha'apai and Vava'u. There were, for example, about 10

Table 3.11: Distribution of Households
According to Possession of Selected
Amenities (Percentage)

Type of Amenity	Tongatapu	Ha'apai	Vava'u
Watertank	9.9	4.1	6.0
Pipewater	4.6	-	-
Wells	46.4	42.9	40.3
Electric light	19.8	-	-
Telephone	6.6	-	-

Source: Field-surveys (Appendix IV, Q.18), 1970-71.

water tanks for every 100 households in Tongatapu, while for the same number of households in Ha'apai and Vava'u there were approximately only 4 and 6 water tanks respectively.

Lighting facilities in the majority of Tongan households were observed to be rather poor. At night most houses were in little-better-than semi-darkness; they were lit by small kerosene lamps which provided scant illumination. The problem was most acute in the more isolated villages of Ha'apai and Vava'u where, not uncommonly, the local store(s) would be without kerosene for a few weeks because of transport difficulties.

An examination of Table 3.11 shows that whereas 1 in 5 households in Tongatapu had electric lights, not a single household in Ha'apai and Vava'u was so equipped. Apart from the public hospital and a few government buildings in Vava'u, and the hospital and the Catholic presbytery in Pangai, no house in these two regions had electric lights. Again, Ha'apai and Vava'u households were distinguished by the absence of telephones while, by contrast, Tongatapu households had 1 telephone for every 15 of them. However, most of the households with telephones were in the Nuku'alofa area, as was the majority of those with electric lights.

Household durables

The majority of houses in all three regions had limited range of furniture -beds, tables, chairs and stools- the range tending to correlate fairly closely with the type of house and its quality or alternatively with income. The better European type houses invariably had most in the way of furniture. Data collected for a number of selected durable consumer goods are summarised in Table 3.12. It

Table 3.12: Distribution of Households According
to Durables Possessed
(Percentage)

Type of Possession	Tongatapu	Ha'apai	Vava'u
Refrigerator	2.6	-	-
Food cupboard	66.9	55.1	50.7
Stoves	10.6	2.0	3.0
Chairs	46.4	40.8	38.8
Tables	33.1	16.3	25.4
Beds	66.2	59.2	56.7
Sewing machines	23.2	12.2	19.4
Washing machines	1.3	-	-
Clothes iron	66.2	42.9	65.7
Transistor radios	92.7	65.3	77.6
Radiogram/tape recorder	7.3	2.0	1.5

Source: Field-surveys, (Appendix IV, Q.18), 1970-71.

can be clearly seen that there were proportionately more households in Tongatapu that possessed the listed goods than in Ha'apai and Vava'u. Moreover, with regard to possession of luxury goods such as refrigerators, stoves, radiograms, etc., Ha'apai and Vava'u households were again lagging very much behind those in Tongatapu.

Progress in housing since 1956

A comparison of the survey data on housing with those obtained in the 1956 and 1966 censuses provides an indication of how each region has progressed during the past 15 years, remembering of course that the two sets of data are not exactly comparable. Table 3.13 indicates that Tongatapu has made the most progress towards adopting European type of houses. Here there has been a decrease in the percentage of traditional houses, and an increase in the proportions of both semi-traditional and European houses. By contrast, Ha'apai and Vava'u show increases in the percentage of traditional houses and decreases in the percentage of European houses. As indicated earlier, housing is a fair measure of prosperity; thus the higher percentages of European houses in Ha'apai and Vava'u in 1956 compared to Tongatapu correspond to the higher per capita incomes of those two regions during the 1950s.¹ Likewise the comparatively greater increase in the proportion of European houses in Tongatapu since 1956 corresponds to the higher increases in per capita income in that region especially since the early 1960s. It should be noted in this connection that the hurricane which swept

1 See Table 6.1, and also Maude (1965, 173).

Table 3.13: Distribution of Houses According
To Types - 1956, 1966, 1970
(Percentage)

House Types ¹	Tongatapu			Ha'apai			Vava'u		
	<u>1956</u>	<u>1966</u>	<u>1970</u>	<u>1956</u>	<u>1966</u>	<u>1970</u>	<u>1956</u>	<u>1966</u>	<u>1970</u>
Traditional	42.9	42.7	32.4	34.5	36.7	44.9	20.5	20.5	28.3
Semi-traditional	24.2	15.8	25.8	31.1	26.5	28.6	20.3	14.3	26.9
European	28.7	39.6	41.8	31.8	31.8	26.5	44.1	54.5	44.8
	96.0	98.1	100.0	97.4	95.0	100.0	84.9	89.3	100.0

- 1 In order to facilitate comparison with this study's survey results, the census data were slightly re-arranged. Thus, traditional house corresponds to the census Tongan style-house, European to European-style, and semi-traditional to iron roof with thatched walls, thatched roof with wooden walls and iron walls with thatched roof. It can be seen that the percentage totals for the census data do not add up to 100.0 This is due to the fact that a number of houses were classed simply as 'Temporary dwellings', 'Not stated' and 'All others', with no indication of the type of the materials they were built of.

Sources: Tupouniua (1958); Fiefia (1968); and field-surveys (App. IV, Q.19), 1970-71.

through the Ha'apai and Vava'u groups in early 1961¹ has been an important factor in the relative decline in the number of European houses in those groups. Few houses were left standing and most coconut and banana plantations, the major source of cash income, were destroyed in that hurricane.

But housing conditions are not simply the results of economic considerations; they are also a reflection of cultural attitudes.² The attitude of the Tongan towards a house is very different from that of the usually 'house-proud' European. Evidence gathered suggested that although the Tongan is anxious to improve his housing conditions, he is often unable to maintain the house in as good a position as possible. As one informant put it: "... the trouble with us Tongans is that we have as yet to realise the need to consistently aim for the best in anything we do to improve our living conditions". Alternatively, the money that has been saved for a house is often spent on apparently less important social matters.³

The evidence collected also indicated that regionally there was some difference in attitude to housing. The inhabitants of Tongatapu, especially those in the urban area, appeared more committed to improving their housing conditions than those of Ha'apai and Vava'u, judging by the relatively greater number of new European houses built in the former in recent years, by the conditions of the houses, and by the greater amount of money annually spent

1 See Appendix I.i.

2 Walsh (1964, 106) and Maude (1965, 173) have also made similar observations.

3 See Appendix I.iii.

by the average household on housing.¹ A comparison between a number of households from each region with respect to housing also confirmed this difference in attitude towards housing.

Although Nuku'alofa generally had much better housing conditions than any other settlement in Tonga, it also had some of the worst examples of housing that were observed in the course of the field-survey. About one-quarter of the surveyed households in Nuku'alofa lived in make-shift dwellings which were largely an ad hoc affair, and most of them were occupied by migrants who could not build better houses either because they could not afford them or because they had no security of tenure of the land ('api kolo) on which they had built.

Conclusion

Perhaps the two most important conclusions that can be drawn from the analysis of this Chapter, are, firstly, the existence of marked inter-regional differences in most of the variables considered, and, secondly, a fairly marked distinction between the Tongatapu households, on the one hand, and the Ha'apai and Vava'u households on the other.

The inter-regional differences in household size, household type, and age-sex structure appear to have been brought about by inter-regional migration which, in turn, has been influenced by inter-regional inequalities in socio-economic opportunities. Thus the inter-regional disparities in socio-economic development appear to be the ultimate determinant of the nature and extent of differences in the demographic

1 See Chapter 5.2 for expenditure on housing.

and household characteristics examined. The direction of, and main reasons for, migration underlined the fact that Tongatapu was the most advanced of the three regions studied.

The relative positions of the three regions with respect to levels of socio-economic development also emerged when educational level and housing conditions were considered. Thus, although the majority of households in all three regions were poorly served in most aspects of housing, the Tongatapu households were nevertheless better off than their counterparts in Ha'apai and Vava'u. Moreover, available evidence also indicated that of the three regions Tongatapu has made the most progress in housing since 1956.

CHAPTER 4: ECONOMIC ASPECTS OF DEVELOPMENT:
PRODUCTIVE RESOURCES AND PRODUCTION

Because the majority of Tongan households depend principally on utilising land resources for their livelihood, it is appropriate that the nature and extent of land availability should loom large in any analysis of household levels of living. Utilisation of these resources, however, involves investment of money and labour. Bush land has to be cleared and planted, roads constructed, agricultural tools, buildings, and so on, have to be made or bought. For some households, paid employment of a member or members provides their main source of livelihood. Thus, the first part of this Chapter considers not only the nature and extent of available land resources but also the character and level of capital goods and labour available. It also presents an account of the ways in which these resources were being used. The second part of the Chapter is devoted to assessing the composition and level of output or production of goods that accrued to the households from utilisation of their productive resources. A general consideration of the factors affecting production is also given.

4.1: LAND RESOURCES

Land distribution

Land and its products are the basis of Tonga's livelihood; most households derive at least the major part of their basic requirements from the cultivation of

land. Generally speaking, the amount of land and the form of tenure under which it is held are important determinants of the level of living which the household can attain. Equally as important, of course, are the ways in which the land is used.

Although landholdings¹ in Tonga are legally conceived and recorded in terms of individuals, the following discussion is, for obvious reasons, in terms of households. The distribution of the surveyed households according to the number of land plots to which they had access² is indicated in Table 4.1. This Table shows that most households in each region had access to land. As a matter of fact, every household in Tonga could gain access to some land through one means or another.³ Households that had no access to any land did so by choice, and of these Tongatapu had by far the highest proportion.⁴

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- 1 In the context of this study, a landholding refers to the total area of land 'owned' by the household and/or the land the use of which had been granted by the 'owner' to the household. It should be noted here that there is no absolute ownership of land in Tonga. All land in Tonga is ultimately the property of the Crown, and 'ownership' in terms of 'registered' tenure is only one of life interest. See Nayacakalou (1959) and Maude (1965).
 - 2 The term access, as used here, simply means the right of use which a household has with reference to a particular landholding irrespective of the nature of that usufructuary right. It may be a 'permanent' right by virtue of 'ownership', leasehold right or a temporary right through borrowing.
 - 3 See Appendix IV (question 5) for the various ways of acquiring land. For those with no land and who cannot get any from a titled estate-holder, nōpele or matāpule, the Government or a landholder's representative, the most common way of obtaining access to land is by borrowing from friends or relatives.
 - 4 This landless group of households, if they may be so called for want of a better term, were of two types: those in which at least one member of the household was earning sufficient wage or salary which allowed the household to buy all its food and other needs; and those headed by a widow with only young children or consisting of all females or elderly persons who would generally be provided for by relatives.

Table 4.1: Distribution of Households According
to Number of Land Parcels
(Percentage)

No. Land Parcels	Tongatapu	Ha'apai	Vava'u
0	11.3	2.0	3.0
1	82.1	65.3	85.1
2	6.0	32.6	11.9
3	0.7	-	-
TOTAL:	100.1	99.9	100.0
Average number of parcels per farming household ¹	1.2	1.5	1.2

1 In the context of this study, a farming household is one that undertook some cultivation, irrespective of the contribution of that cultivation to total household production.

Source: Field-surveys (Appendix IV, Q.5), 1970-71.

Because of the variations in the size of landholdings, it is necessary, when assessing the amount of land resources available to the average household, to consider the acreages involved in addition to the number of parcels. Table 4.2 summarises details of the distribution of households according to acreages of land to which they had access. It is evident from the Table that the average household in Vava'u and Tongatapu had access to more land than its counterpart in Ha'apai. The typical landholding varied from 5.0 acres in Ha'apai to 7.6 acres in Tongatapu to 8.3 acres in Vava'u.

Evidence collected during the course of the field-survey suggested that the average Tongan household, which derived most of its food needs from cultivation, required, under existing agricultural practices, a minimum of about 4 acres of garden land. On this basis, the average regional holdings would appear to be adequate. However, while this would generally be true of the situation in Tongatapu and Vava'u, it was not necessarily the case in Ha'apai where, in some areas, inaccessibility, predominance of sandy soils, and fragmentation reduced the acreages readily usable to well below the 5-acre overall average. Moreover, of the 28 Ha'apai holdings which were of between 3 and 6 acres in size, nearly half were below 4 acres. A further 7 households had holdings which were less than 3 acres. The situation was made more serious by the fact that all of these households with insufficient holdings contained no members who were in paid employment. As one informant complained: "The size of my holding is too small to permit much cash cropping without reducing the area I require for cultivating subsistence food crops. I cannot get any more land anywhere on this

Table 4.2: Distribution of Households According
to Acreage of Landholding
(Percentage)

Acreage	Tongatapu	Ha'apai	Vava'u
Nil	11.3	2.0	3.0
Greater than 0 less than 3	2.6	14.3	3.0
At least 3, less than 6	17.2	57.1	20.9
At least 6, less than 9	59.6	20.4	62.7
At least 9, less than 12	3.3	4.1	4.5
At least 12, less than 15	2.0	2.0	3.0
15 and more	4.0	-	3.0
TOTAL:	100.1	99.9	100.1
Average acreage per farming household	7.6	5.0	8.3

Source: Field-surveys (Appendix IV, Q.5), 1970-71.

island and other avenues of earning cash are just not available. I am only one of many in the Ha'apai group who are, and have been for years, in this unfortunate predicament".

Table 4.2 also shows that whereas more than half of the Tongatapu and Vava'u holdings were between 6 and 9 acres (mostly 8½-acre allotments), only about 20 per cent of the Ha'apai holdings were of that size with the majority (57 per cent) falling into the 3-6 acre group. Further, of the holdings of at least 9 acres, Ha'apai claimed proportionately the lowest percentage, even though the variations in the regional proportions falling into these larger sizes were fairly small. These results differ appreciably from those obtained by Hardaker (1970, 32). Hardaker found, for example, that 45 and 57 per cent of the Tongatapu and Vava'u households respectively occupied holdings of at least 9 acres each; and in Ha'apai the comparable percentage was 37. Overall, the total area per household was 11.4 acres (Hardaker, 1970, 45). Compared with the results obtained in this study and those based on information obtained from the Department of Lands and Survey,¹ Hardaker's acreages appear rather large. The difference could be due to sampling errors, especially since the sizes of Hardaker's regional samples (65 households in Tongatapu, 16 in Ha'apai and 21 in Vava'u) were much smaller than those of the present study. Moreover, in another study in which he surveyed 110 households in Tongatapu, 45 in Ha'apai and 55 in Vava'u, Hardaker (1973, 8) found that the total farm land area per household was only 9.9 acres as opposed to 11.4 acres of his earlier and smaller-sized survey.

1 Figures obtained from the Department showed that in 1971 the overall average acreage of tax allotment was less than the customary 8½.

Land tenure

The significance of the forms of tenure under which holdings are held cannot be over-emphasised. The advantages of secure tenure have been given considerable attention by a number of writers¹ on Pacific affairs.

Information on the various forms of tenure² under which household holdings were held are presented in Table 4.3. The Table shows that the Tongatapu households were better off than those in Ha'apai and Vava'u in that they had proportionately the largest percentage (60.4) with at least one parcel of land under secure tenure, while the corresponding figures for Ha'apai and Vava'u were both less than 50 per cent. As for customary tenure, the regional percentages showed the reverse to those for registered tenure, the Ha'apai and Vava'u percentages being much higher than the comparable figure for Tongatapu. A number of the people interviewed suggested that the greater incidence of customary tenure in Ha'apai and Vava'u was due mainly to the inability of current holders to pay for surveying and subsequent registration,³ in addition, of course, to the fact that progress in land surveys has been

1 For example, Stace (1956) and Crocombe (1971).

2 See Appendix IV (question 5) for the various forms of tenure.

3 The cost of surveying an 8½ acre 'api tukuhau was \$16.00 and \$2.00 for registration at the time of the fieldwork for this study.

Table 4.3: Distribution of Households According
to Form of Tenure of Landholding
(Percentage)

	Tongatapu	Ha'apai	VAva'u
At least one parcel ¹ in registered tenure	60.4	41.7	46.2
At least one parcel in leasehold	3.7	4.2	4.6
At least one parcel in customary tenure	9.7	20.8	24.6
Temporary tenure	26.1	33.3	24.6
TOTAL:	99.9	100.0	100.0

- 1 A piece of land held under registered title is in secure tenure since once it is registered the holder cannot lose it while he is alive, unless he fails to comply with the legal conditions of tenure.

Source: Field-surveys (App. IV, Q.5), 1970-71.

lagging in Ha'apai and Vava'u.¹ The writer, supported by a number of informants, is of the opinion that the 'secure' status traditionally accorded to customary tenure was also a major factor responsible for the proportionately greater number of customary holdings in Ha'apai and Vava'u. This customarily protective factor did not appear to be as significant in Tongatapu for the people there generally seemed to be rather wary of traditional rights in land matters. As one landholder viewed it: "... under registered tenure, the estate-holder cannot take away my land, but under customary tenure, I am the owner only as long as the estate-holder pleases". Land in Tongatapu has in recent years brought considerable cash income to estate-holders especially through leasing, and there has emerged a marked tendency among the nobles to disregard the holders' customary rights and to exert their own legal rights over the landholdings. This tendency, coupled with a generally keener competition for land in Tongatapu, has forced the land holders there to appreciate to a greater extent than did those in Ha'apai and Vava'u the difference between registered and customary tenure. In this connection, it is interesting to note that

1 The Governor of Vava'u has, for example, repeatedly complained, though in very polite terms, about the failure to distribute tax allotments in many parts of Vava'u. In his 1967 report, for instance, he noted that "no further action has been taken since the Hon. S. Laufilitonga Tuita, Minister of Lands, deferred the distribution of tax allotments in 1964; it is hoped that the work will be completed in the near future. The following are the villages including islands where land has not been distributed - Holonga, Tefisi, Tu'anuku, Longomapu, 'Utui and all the Islands District. No allotments were distributed in 1967". (Report of the Premier for 1967, p. 56).

of the 18 households in Tongatapu with at least 1 parcel of land in customary tenure, 8 were migrant households that had customary holdings in Ha'apai and Vava'u.

The regional proportions of households with at least 1 parcel of land under leasehold tenure displayed no important variations. There were, on the other hand, significant variations in the regional proportions of holdings under temporary or insecure tenure. Households with such holdings were more numerous in Ha'apai than in Tongatapu and Vava'u. One-third of all holdings in Ha'apai were of insecure tenure while the corresponding proportions in Tongatapu and Vava'u were both under 20 per cent. In Ha'apai the great majority of the holdings under insecure tenure were less than 3.5 acres in area, while in Tongatapu and Vava'u the acreages ranged widely from 3 to 8½ acres.

Land use

Apart from being the major occupation and basis of livelihood in Tonga, agriculture is also the main form of land use.¹ It involves an annual cycle of clearing fallow land, planting root crops and harvesting as requirements arise.

Although the acreage in any crop is only a general index of production due to a wide variation in the intensity of land use, differences in soil types, agricultural technology, and so on, it does nevertheless provide a useful indication of the level and composition of agricultural production of the farming households. The average area of household garden and the acreages devoted to the major types of land

1 For a more detailed account of the various types of land use and of cultivation methods practised in Tonga, see Maude (1965).

use in the three regions are shown in Table 4.4; the average size of the household garden¹ was smallest in Ha'apai with 2.5 acres and largest in Vava'u with 3.8 acres. Generally speaking, households with more than the average area in gardens were producing for the market as well as for household consumption. Overall, less than one half of the total acreage of holdings in Tongatapu and Vava'u was cultivated, while in Ha'apai the corresponding proportion was higher, being over 50 per cent.

There were no regional variations in the range of crops grown. With the exception of vanilla, an export crop which is grown almost exclusively in Vava'u, all of the crops listed in Table 4.5 were grown by most households. There were some variations, however, in the acreages devoted to the individual crops. The three leading crops, in terms of acreage, in Tongatapu and Vava'u were yam, talo and bananas; in Ha'apai cassava was by far the most important crop, followed by yams and talo. That cassava, a crop of low nutritive value, was comparatively more significant in Ha'apai is due mainly to the fact that unlike most other food crops it grows well on sandy and infertile soils. Moreover, it can be grown year after year on the same piece of land without the land having to be laid fallow for a period, an advantage in many of the land-scarce islands of Ha'apai. In all three regions, these four crops plus kumala took up no less than 70 per cent of all the planted acreages. Watermelons, peanuts and vegetables were in the main grown primarily for the local market, and were proportionately more significant

1 Excluding the acreage grown under coconut palms only.

Table 4.4: Average Patterns of Household
Land Use

Land Use	Tongatapu		Ha'apai		Vava'u	
	<u>Acreage</u>	<u>%¹</u>	<u>Acreage</u>	<u>%</u>	<u>Acreage</u>	<u>%</u>
Food crops	2.85	37.2	2.39	47.8	3.53	42.5
Non-food crops ²	0.18	2.3	0.15	3.0	0.27	3.3
Fallow ³	2.64	34.4	1.31	26.2	3.65	44.0
Land borrowed by others	2.00	26.1	1.15	23.0	0.85	10.2
TOTAL:	7.67	100.0	5.00	100.0	8.30	100.0
Acreage in coconuts ⁴	4.94	64.4	3.08	61.6	6.24	75.2

1 Percentage of total holding acreage.

2 This group of crops includes kava, hiapo (paper mulberry tree), pandanus and vanilla, although vanilla is strictly a food crop.

3 A portion of land was regarded as fallow land if there were no crops grown on it, except coconut palms.

4 Average of total holdings that was grown in coconuts.

Source: Field-surveys (App. IV, Q.7), 1970-71.

Table 4.5: Average Crop Acreages in
Household Garden

Crop	Tongatapu	Ha'apai	Vava'u
	<u>Acreage</u> ¹	<u>Acreage</u>	<u>Acreage</u>
Yams	0.53	0.52	0.75
Talo	0.57	0.35	0.61
Kumala	0.45	0.25	0.40
Bananas	0.62	0.38	0.61
Cassava	0.24	0.70	0.41
Other food crops	0.44	0.19	0.75
Non-food crops	0.18	0.15	0.27
Total gardened area:	3.03	2.54	3.80

1 Where inter-cropping occurred, which was the rule, the cultivated area was divided up equally among the crops so grown.

Source: Field-surveys (App. IV, Q.7), 1970-71.

in Tongatapu where the marketing opportunities were better than in the other two regions.

The proportion of the average holding that was planted in coconut palms varied from 64.4 per cent in Tongatapu to 61.6 per cent in Ha'apai and 75.2 per cent in Vava'u. The absolute acreage generally varied according to the size of the holding; the larger the holding the greater was the acreage planted in coconut palms. Only a small percentage of holdings in all three regions were fully planted with coconut palms. Most farmers, when asked for the reason why their holdings were only partly or thinly planted with coconut palms, stated that they preferred to keep portions of their land free of palms for the cultivation of food crops. They argued that the shade cast by the palm leaves lowered the yield of crops grown near the trees. It seems more likely, however, that such low yields would result from the competition for soil moisture between the shallow rooting palms and the food crops. Personal observations suggested a greater density per unit area of coconut planting in Ha'apai than in the other two regions; there also appeared to be a greater intensity of general cultivation in the former region¹ - perhaps a natural consequence of limited available land.

As a rule, coconut plantations received very little attention, even though they were the most important cash

1 Also according to an officer of the Agriculture Department in Ha'apai, growers there were better users of the land than most Tongan farmers, in the sense of trying to get the maximum returns from the land used.

crop in Tonga. The palm trees were kept free of weeds only when they were in a gardened area of the holding, making for low productivity. This is an aspect of Tongan agriculture that is difficult to understand considering the numerous benefits, both subsistence and commercial, that the Tongan household can derive from the coconut tree, and also the fact that cash earning opportunities are rather limited.

The survey revealed that as far as production for household consumption was concerned, land resources available to the average household were quite sufficient. But for cash production, particularly of coconuts, many of the households had insufficient acreages. Those without land of their own were in the worst position,¹ for although they could borrow land, they could not grow coconut palms (for their own use) on any of the land borrowed nor could they make copra from the coconut trees grown there.² This problem was most acute in the more densely populated and isolated areas of Ha'apai where landholdings were characteristically small and where copra was practically the only source of cash income.

4.2: LABOUR RESOURCES

Distribution of labour force by occupation

Details relating to the regional labour forces are presented in Table 4.6. The Table shows that there were roughly 2 economically active persons per household in

1 See section 4.5.

2 They do, however, sometimes ask for coconuts - a cartful or truckful - especially if the landholder is a relative.

Table 4.6: Distribution of the Economically-
Active Population by Major Occupations¹
(Percentage)

Occupation	Tongatapu	Ha'apai	Vava'u
Agriculture	72.2	75.0	84.8
Fishing	1.5	15.4	2.5
Paid Employment	26.3	9.6	12.7
TOTAL:	100.0	100.0	100.0
Average number economically-active persons per household	1.8	1.1	1.2

- 1 Excluding those engaged in domestic duties, virtually all of whom were women, and students. Although students were not included in the work force, it should be noted that their contribution especially of those 15 years and over was quite considerable.

Source: Field-surveys, (App. IV, Q.3), 1970-71.

Tongatapu, and in both Ha'apai and Vava'u the corresponding number was 1. The Table also reveals that no less than 70 per cent of the total labour force were engaged in agriculture, with the proportions lowest in Tongatapu and highest in Vava'u. Very few of these men, however, were engaged exclusively in farming. In the words of the 1956 Population Census Officer: "In general the Tongan is an agriculturalist working for himself and his family. At the same time he tries his hand spasmodically at a number of other occupations that are likely to yield extra cash to augment his farm income (Tupouniua, 1958, 32). Perhaps the most widespread of these 'other occupations' is fishing, which was particularly important in Ha'apai (Table 4.6).

Few tasks performed in the normal course of life of the average household required particularly demanding skills, and there was little opportunity for specialisation. A fairly uniform level of skills and knowledge was acquired by all village Tongans.

The household formed the basis of the labour used on the farm, and there was at least 1 male adult per farming household. This household labour performed most of the day-to-day tasks of cultivation such as weeding, planting and harvesting. Moreover, for household production this labour supply was more than adequate in all three regions. Farming households also employed, from time to time, additional labour to work on their farms. The most common form of this labour was the tou ngaue, a working party which might comprise anything from 2 to about 10 men who worked cooperatively for each of the members in turn. Roughly half of all farming households in each region used this form of labour at one stage or another during the year.

Hiring of labour was also another way in which outside labour was engaged on the household farm. The practice was confined almost wholly to Tongatapu. Only 3 households in Vava'u and 1 in Ha'apai were recorded as having hired labour for farm work, and in each case the hired labour was employed for only a couple of days. By contrast, 29 of the Tongatapu households hired labour for longer, though varying, periods during the 12 months under study. In 12 of the 29 households labour was hired because the respective heads were in paid employment and there were no other males in those households to do the work which the former could not do on Saturdays and/or their days off. The remaining 17 were households that were producing a considerable amount of produce for sale. The average rate of pay was \$1.00 per day per person in Tongatapu, while in Ha'apai and Vava'u it was only 80 cents.

The proportion of the regional labour that was engaged in fishing was highest in Ha'apai and least in Vava'u. It should be borne in mind, however, that these fishermen also did a considerable amount of gardening and other productive work. Those in Ha'apai who stated their occupation as fishing were 'being employed' as fishermen by Fathom Fisheries Ltd.¹ Strictly speaking, these men were not employed by the firm, but because the latter provided them with boats and fishing gear, and in turn bought their catches they regarded themselves as being employed as fishermen. Moreover, although these men spent more time in fishing than those who did not participate in this venture, they still

1 See Appendix I.ii.

devoted, on average, more time to gardening than fishing.

Observations made during the course of the fieldwork tended to suggest that the recorded number of fishermen in Tongatapu and the number of households that derived cash income from sales of fish appeared to be higher than that suggested by the recorded number of fishermen. It seemed to the writer that where a man divided his time among several occupations, one of which was agriculture, the tendency was to regard himself as primarily a farmer.

In terms of the number of households in which at least one person was in full-time paid employment, there were 38 such households in Tongatapu, 4 in Ha'apai and 9 in Vava'u. The number of people in paid employment was a function of the number of jobs available rather than the size or quality of the labour force. The proportionately greater number of people in Tongatapu in paid employment reflects the concentration of paid jobs in that region. A government official estimated that for every 10 paid jobs created in Tonga, at least 8 of them were bound to be in Tongatapu.

In all three regions about 65 per cent of all those earning wages were employed by the government, the largest employer in Tonga. Most of government jobs were concentrated in Nuku'alofa, the centre of a very centralised government; an estimated 85 per cent of all wage and salary earners employed by government were located on Tongatapu, as were the majority of those working in the private commercial sector. Not only was the number of available jobs more numerous in Tongatapu, but the range was also greater there. Thus, in Tongatapu jobs of most kinds - professional, commercial, manufacturing, construction, transportation and

so on - were represented, while in Ha'apai and Vava'u paid work was mainly of the professional and administrative type.

Regional variations in opportunities for paid employment become even more marked when part-time or casual paid employment is considered. Whereas 42 per cent of the households in Tongatapu benefited from intermittent paid employment, less than 2 per cent of the households in both Ha'apai and Vava'u managed to get some form of casual paid work. Wage-labouring in construction and agricultural works, stevedoring, and transportation were among the more important forms of casual paid employment.

Under-employment

In an attempt to assess the degree to which there was surplus labour or to which available labour was under-employed, the household head was asked to estimate the number of adults in his household that could be released for employment elsewhere without adversely affecting necessary household activities. Analysis of answers to this question revealed that 32.8 per cent of the labour force in Tongatapu could be released from household work without causing any adverse decline in the current level of production of goods and services. The corresponding percentages in Ha'apai and Vava'u were 22.7 and 21.6 per cent respectively. In absolute terms, these figures represent an average of approximately 1 person per household in Tongatapu, and just over 1 person for every 2 households in both Ha'apai and Vava'u.

Details relating to the hours spent by the adult males

in productive activities¹ such as farming, fishing, house-building, etc. also showed the existence of under-employment. The survey revealed that the average male² in Tongatapu worked a mean of 30 hours a week; the comparable hours for Ha'apai and Vava'u were 25 and 27 respectively. If 260 days is taken as the full normal working year, then the average male in Tongatapu only worked 195 days or $9\frac{3}{4}$ months of the full working year; the corresponding figures for Ha'apai and Vava'u were 163 days or 8 months, and 189 days or $9\frac{1}{2}$ months respectively. Thus more than 2 months of the working year would be spent in non-productive activities.

Occupational preference rating

It is the ambition of most Tongans to work at something "better" than farming. The regular and secure cash income from non-agricultural employment plus the increasing inability of agriculture to earn a satisfactory level of cash income are causing people to seek occupations other than agriculture. Moreover, the marginal returns to labour in the small scale farming system such as practised in Tonga are often inadequately low, so that there is commonly a strong attraction into wage labour where it is available. The risk elements noted in section 4.5 are also important considerations in this connection.

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- 1 In the context of this study, productive activities include those which contribute in some identifiable way to the economic life of the household (including village). These cover all forms of agricultural activity (cultivation and collection of both subsistence and cash crops, and maintenance of the plantations), the marketing of cash crops, fishing (and selling of fish), and building. For a discussion of the problems of differentiating between productive and non-productive activities in the context of village economy, see Fairbairn (1970, 64-65).
 - 2 Excluding, of course, those in full-time paid employment who normally worked 40 hours a week.

In an attempt to gauge the attitudes of Tongans towards the various kinds of occupations available in the Kingdom, informants were asked to rank the major occupational types according to their preferences either with regard to themselves or to their children. As was expected the majority (50.2 per cent) ranked professional/white-collar jobs as their first preference (Table 4.7). A further 13.5 per cent also ranked other wage earning jobs as their first choice, making a total of 64.4 per cent altogether who preferred paid employment to all other kinds of occupations.¹ Most of these informants gave as their reasons for preferring this type of employment, in particular professional/white-collar jobs, secure and regular payment, prestige, and social status. In the words of one farmer, "the labour involved in agriculture is too much in comparison to the cash received. By contrast, in paid employment no matter what happens one is always sure that one gets paid at the end of the week or month. Not so in agriculture".

The extent of preference for wage employment also indicates the degree to which money has become an important part of the life of the Tongan household. Agriculture was preferred as first choice by only 27.3 per cent of the informants. These informants regarded it as the best occupation in Tonga, since it provided all the food a household needed and much of the required cash, provided those concerned worked hard. It was significant to note that informants who argued in this manner were mainly those who, by local

1 Allen (1969, 143-44) found that, of the 91 Cook Islanders (Mangaians) he interviewed, over half chose paid employment as the most desirable occupation, while only 17.6 per cent preferred agriculture.

Table 4.7: Occupational Preference Rating
by Household Heads¹

Occupation	Tongatapu	Ha'apai	Vava'u	Total
	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>
Agriculture	32.4	22.4	19.3	27.3
Fishing	1.3	10.2	4.5	3.7
Professional White-collar	46.4	49.0	59.7	50.2
Skilled trade	6.6	6.1	3.0	5.6
Wage labouring	7.3	8.2	9.0	7.9
Self-employment Entrepreneur	6.0	4.1	4.5	5.2
TOTAL:	100.0	100.0	100.0	99.9

1 First preferences only.

Source: Field-surveys (App. IV, Q.15), 1970-71.

standards, were relatively successful farmers. It is also noteworthy that there were proportionately more informants in Tongatapu than in the other two regions who preferred agriculture to other types of occupations. This logically follows from the fact that agriculture is more remunerative in Tongatapu than in Ha'apai and Vava'u.

4.3: CAPITAL RESOURCES

A specific and limited type of capital goods was used by the average Tongan household to produce additional income. It included agricultural equipment, fishing gear, boats and canoes, carpentry tools, stores and vehicles, all of which have been made or obtained through investment of money and subsistence resources. In order to assess and compare the level of capital resources belonging to the average household in each region, monetary values were imputed for these capital goods.¹

Agricultural tools and equipment

The standard farming implements were the long bush knives (machetes), hoes, digging forks, spades and axes, all of which were purchased items.² All households possessed at least one bush knife and one or two hoes. The other

1 The methods used to impute monetary values to capital goods are outlined in Appendix II.ii.

2 The traditional agricultural tools included coconut-leaf baskets, wooden shoulder-yokes, and digging sticks, used for planting talo tonga in swampy areas. These tools required very little investment in terms of either money or subsistence resources and as such no attempt was made to record them.

implements were owned only by a minority but were used by most through borrowing. Table 4.8 presents details of the value and composition of agricultural and other capital goods owned by the average household in each region. It can be seen that the level of household investment in agricultural tools was highest in Tongatapu. Households there owned about twice as many agricultural tools as the average household in both Ha'apai and Vava'u. That the average Tongatapu household invested more on agricultural tools was the result not only of a higher level of cash income (see Chapter 5), but also of the generally increasing reluctance of people there to lend tools to neighbours and even relatives. This practice of lending was observed to be much more widespread and acceptable in most parts of Ha'apai and Vava'u; the traditional communal spirit of the Tongan people was generally stronger in the smaller and more isolated village communities.

In addition to these tools there were other items of agricultural capital which were used by some households. They included carts, horses, copra dryers, pigsties, sprays, fowl fences and agricultural machinery such as tractors and ploughs. Of these, horses, and to a lesser extent, copra dryers and pigsties, were the most widespread. Overall the proportion of households owning some of these resources was highest in Tongatapu and least in Vava'u. Thus, there were 3 horses for every 10 households in Tongatapu, while the comparable figures were 3 per 15 households in Ha'apai and 3 per 12 in Vava'u. Again, Tongatapu had 1 pigsty to every 25 households while in Ha'apai there was no pigsty recorded, and in Vava'u there was only 1. None of the

Table 4.8: Capital Goods Owned¹ by the
Average Household
(Estimated Value)

Item	Tongatapu			Ha'apai			Vava'u		
	A ²	B	C	A	B	C	A	B	C
Agricultural tools	8.8	82	18	4.8	85	15	4.7	79	21
Other agricultural capital ³	16.6	44	56	4.7	30	70	9.5	32	68
Fishing gear	3.3	79	21	5.1	47	53	2.8	71	29
Boata and canoes	5.7	65	35	13.0	32	68	7.6	84	16
Carpentry tools	3.5	100	-	1.4	100	-	1.4	100	-
TOTAL:	37.9	64	36	29.0	46	54	26.0	63	37

1 At the time of the survey.

2 A - Estimated value (\$); B - Cash component (%);
C - Subsistence component (%).

3 Includes such items as copra dryers, carts, etc.

Source: Field-surveys (App. IV, Q.10), 1970-71.

surveyed households owned either a plough or tractor.

The total value of household 'other' agricultural capital is shown in Table 4.8 to be highest in Tongatapu. A closer examination of the Table reveals that in all three regions the cash component of this investment was higher than the subsistence component. With the exception of the amount invested in vehicles in Tongatapu and Vava'u, and in boats and canoes in Ha'apai, agricultural capital claimed everywhere the highest proportion of total household investment in the range of capital goods considered here.

Other capital resources

The comparatively greater importance of boats and canoes to the inhabitants of Ha'apai is reflected by the figures shown in Table 4.8. Among the 49 Ha'apai households surveyed, there was 3 boats and 6 canoes compared with only 1 boat and 1 canoe among the 67 Vava'u households, and with 3 boats and 2 canoes among the 151 Tongatapu households. Fishing gear was simple and most items involved only a small investment of labour and money. They included long nets, nylon lines, hooks, crab pots, and so on. The average level of investment in fishing gear was highest in Ha'apai.

Ownership of stores was highest in Tongatapu. Whereas 7 of the Tongatapu surveyed households owned stores, there were only 1 and 2 such households in Ha'apai and Vava'u respectively. Further, while practically every village on Tongatapu was served by at least 1 store, the Ha'apai and Vava'u villages, particularly those on the smaller islands were, by contrast, not so well served. At least a quarter of the villagers in Ha'apai and Vava'u had to travel great

distances once a week or fortnight to do their shopping.

4.4: PRODUCTION PATTERNS

The following sections concentrate specifically on agricultural, fish and handicraft production. Although attention is focussed on the patterns of production, the major ways in which output was consumed or disposed of are also discussed. Further analysis of household consumption patterns is given in the next Chapter.

Subsistence and cash production defined

In Tonga, as in other under-developed countries, there is generally a wide sphere of economic activity which is carried on not with a view to supplying the demands of the market, but to satisfying direct household needs and social obligations. This sector of the economy is often referred to as the subsistence, non-monetary, or non-cash sector, and productive activities in Tonga are predominantly of this type. In the context of this study, subsistence production includes all goods produced by the household which do not enter the commercial market economy.

The term commercial or cash production is a difficult one to apply in Tonga, for, although the Tongan people have been involved in varying degrees in the market economy during the past century (in their efforts to obtain cash for taxes, church dues, imported goods, etc.), the line between cash and subsistence production has not been clearly drawn. Cash crops and cash income, for example, have been derived largely from surplus coconuts and bananas and not from

plantations developed specifically for cash cropping.¹ This applies to most other crops with the possible exception of watermelons, peanuts, and vanilla. Production of other food crops, handicrafts and fish are, in general, also intended primarily for household consumption, and what enters the market comes from the surplus amount. Because of this lack of clear distinction between subsistence and cash production, and in order to distinguish the latter component from the former, cash production is, in this study, taken to mean only those goods which actually enter the market irrespective of the purpose for which they were originally intended.

Although all Tongan households were found to be fairly well involved in the cash economy, their basic needs of food and shelter were largely met from subsistence production. Most of the food consumed was produced by the households themselves; and the great majority built their own houses.

Patterns of subsistence production

In common with other Pacific Island communities, the principal objective of most Tongan households, the primary units of production, is to meet internal consumption requirements. The main components of this subsistence production include foodcrops, livestock and sea-foods; the production of food takes precedence over all activities in the long run. Other commodities produced by the average

1 In recent years, however, most banana plantations have been developed primarily for market sales; and some women have been producing handicrafts directly for the growing tourist industry.

household for subsistence uses include capital goods such as agricultural equipment, fishing gear, canoes and boats, houses and household durables, an account of which has already been given. Also featuring significantly in the total household production are houses and household valuables.

Food crops:

As has already been indicated in Section 4.1 the principal food staples in all three regions under consideration, and indeed throughout the whole of Tonga, were yams, talo, kumala, cassava and bananas. The Tongans seemed to appreciate variety in their food and most meals generally consisted of a mixture of at least 2 or 3 of the principal staples. Other subsidiary food crops included citrus fruit, mango, pawpaw, pineapple, sugar-cane and avocado pear. European vegetables such as cabbage, sweet-corn, carrots, tomatoes and pumpkins were also grown but, as yet, to a very limited extent. Most of these were grown in Tongatapu where Nuku'alofa provides an increasingly important market for them.

Direct estimation of food crops produced from the average household farm was practically impossible since crops were generally harvested in small amounts when needed. But since the average household in all three regions obtained most of its food needs from the household farm, it was possible to obtain an indirect estimate, on the basis of consumption figures, of the level of subsistence food crop production achieved by the average household. Information obtained from the household case-studies¹ and personal observations indicated that in Tongatapu approximately 74 per cent by value, estimated at the 1970 local market prices,

1 See Appendix II.ii.

of all food consumed by the average household was obtained from the land it cultivated. The corresponding estimated percentages for Ha'apai and Vava'u were 80 and 85 respectively. The average number of consumption units¹ per household were 5.38 in Tongatapu, 4.35 in Ha'apai and 4.21 in Vava'u respectively. This means that there were 4.0 consumption units in Tongatapu, 3.48 in Ha'apai and 3.58 in Vava'u that were fully sustained by food produced from the household farm.

In order to assign some monetary value to this subsistence food crop production, an attempt was made to assess the cost, at the 1970 local market prices, of buying all the food consumed by one consumption unit throughout the year. Information on which this assessment was based was again collected by means of the household case-studies and personal observations. In this way the following values of the average annual cost per consumption unit in each region were arrived at: Tongatapu - \$102, Ha'apai - \$77 and Vava'u - \$80. Using these estimated consumption costs,

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- 1 Because the size and age composition of households varied considerably, it was decided to use the concept of the consumption unit in order to simplify the measurement of the consumption of goods and services so that households and regions could be easily compared. The number of consumption units per household was calculated from a simple table based on observation of village life:

<u>Age (both males and females)</u>	<u>Consumption Units</u>
Less than 1 year	0.0
1 to 4 years	0.5
5 to 9 years	0.7
10 to 14 years	0.8
15 to 59 years	1.0
60 and over	0.8

See Bailey (1957,277) and Epstein (1967, 160).

it was possible to estimate the value of subsistence food produced and consumed by the average household. In addition to the food actually consumed in the household some food supply was given away to relatives, friends, the noble, the village, the pastor or minister, etc. in fulfilment of one obligation or another, or as payments in kind. Some food was also used as livestock feed. The coconut also featured to an important extent in household agricultural production. It possesses both food and cash value for the Tongans, as for other Pacific Islanders.¹ Most meals still include coconuts in one form or another.

Table 4.9 contains details of the average household level of subsistence food production. The regional totals exhibit fairly large differences. But these differences should be interpreted with caution, for they are not necessarily the result only of variations in the actual volume of production. Rather they are combined results of a number of factors such as quantities produced, average prices which the various crops fetched in each region and the types of crops grown. Average prices for most, if not all, food crops were, for instance, much higher in Tongatapu than in the other two regions. A basket of talo, for example, cost an average of 60 cents in Tongatapu but only 30 cents in the other two regions. The average number of consumption units per regional household also has an influence

1 The coconut palm has always been an important tree throughout the Pacific. Apart from the coconuts being used in meals and also made into copra, the leaves are woven into mats and baskets; the trunks are used for house frameworks, and leaves, plaited into pola used for walling or roofing.

**Table 4.9: Average Patterns of Household Gross
Subsistence Food Production¹**
(Estimated Value)

Item	Tongatapu		Ha'apai		Vava'u	
	A ²	B	A	B	A	B
Food crop consumed by household	408	76	281	64	286	68
Food crop given as payment in kind	20	4	28	6	20	5
Coconuts	21	4	13	3	32	8
TOTAL:	449	84	322	73	338	81

1 The estimated values of production shown in this and subsequent Tables refer to the whole 12-month period under survey.

2 A - Estimated value, corrected to the nearest dollar, per household; B - Estimated value per consumption unit.

Source: Field-surveys (case-studies, general inquiries), 1970-71.

on the imputed value of total food crop production; an influence which clearly emerges in the per consumption unit averages for all the food categories listed. Another factor that should be taken into account is the differing amounts of the various crops produced. This is particularly so in the case of Ha'apai where the consumption of cassava, a crop of low nutritive value and one that fetched low prices in all three regions, was responsible in large part for the low cash value of food crops consumed there. But on a per consumption unit basis, there were no significant regional differences in the estimated value of household food production. This supports a conclusion, drawn from personal observations and analysis of relevant data, that overall the level of household subsistence output did not, on a per consumption unit basis, vary significantly from region to region.¹

Subsistence food production in Tonga has probably never been mere production for everyday household needs. It may be that this generation, or at least a section of it, is the first to live at bare subsistence level, apart from previous "crisis" situations of famine caused by warfare and hurricane. There were indications of shortages of staple food in parts of Ha'apai, particularly the smaller islands such as 'Uiha, Ha'afeva, Fonoifua and Lofanga,² the urban sub-region and the more densely populated villages of Tongatapu, and in parts of south-eastern Vava'u. This was evidenced by a decrease in the quantities of such staple foods as talo, yam and kumala produced; an increasingly heavy dependence

1 See section 4.5 .

2 Rogers (pers. comm., 1972) also observed indications of these shortages in his study of the islands of Tungua, Kotu and Matuku.

on the most inferior root crop in Tonga, cassava;¹ the continual harvesting of immature crops, and a chronic incidence of food theft. Over-cropping, soil exhaustion and high incidence of gardens with plants growing very close together are related aspects of the agricultural scene in these areas that were mentioned by some of the farmers and also officials of the Agriculture Department. Although much fieldwork remains to be done to substantiate these indications of food shortages, it is believed they reflect fairly accurately the broad situation in the specified areas. It should be emphasised, however, that these were not absolute but rather relative food shortages and were localised.

Livestock:

Household livestock production in Tonga was mainly for subsistence consumption though some producers, mostly in Tongatapu, have in very recent years been raising some livestock primarily for market sales. Pigs and poultry constituted the two major types of stock raised by most households, with cattle and goats being subsidiary ones. The former are an essential part of the household economy and are used not so much for ordinary every day meals as for feasts at times of weddings, funerals and other ceremonial occasions.

1 In a letter to the Minister of Finance in 1969 concerning the utilisation of land in Tonga, the then Director of Agriculture wrote: "For the first time, towards the end of 1968, food was not available in the adequate quantities hitherto known in Tonga. There was no actual shortage, but the situation is clearly shown by the considerable quantities of cassava (manioc or tapioca) being planted which cannot all be attributed to pig food. The planting of cassava throughout the world is almost always a sign of food shortage, being a crop that yields heavily with little attention and is filling, even though not of high nutritive value".

The household distribution of the various types of stock in each region are set out in Table 4.10. It can be seen that the average household reared about 4 pigs and an equal number of chickens. Goats were proportionately more numerous in Ha'apai where there was at least 1 goat to every household. The average number of cattle per household was highest in Vava'u where there was about 1 head of cattle for every 3 households as against 1 head for every 12 and 24 households in Tongatapu and Ha'apai respectively. The higher average for Vava'u resulted from the inclusion in the sample for that region of a household which had 18 head of cattle and not by any comparatively greater interest shown by the households there in raising cattle.

The imputed subsistence income which the average household in each region derived from livestock is also indicated in Table 4.10. Once again the imputed value was highest for Tongatapu and least for Ha'apai; in all three regions, pigs were the most significant animals. The current level of livestock production was insufficient to satisfy local requirements for meat. To supplement local production, therefore, large amounts of fresh, salted and canned meat, have been imported.¹ But the bulk of meat imports were being sold in Tongatapu, particularly in the Nuku'alofa area, where purchasing power was greater.

Fish:

Fish, shell-fish and other sea-foods also formed an important category in the subsistence food production of the average household. It provided the main source of protein, supplemented by pork, chicken, beef and goat meat. The

1 See Table I.4.

Table 4.10: Average Patterns of Household Livestock
Production
 (Quantity and Estimated Value)

Livestock	Tongatapu		Ha'apai		Vava'u	
	<u>A</u> ¹	<u>B</u>	<u>A</u>	<u>B</u>	<u>A</u>	<u>B</u>
Cattle	0.08	9	0.04	3	0.30	19
Goats	0.08	1	1.35	8	0.10	1
Pigs	4.53	48	3.80	33	4.30	56
Poultry	4.14	2	4.50	2	3.00	2
TOTAL VALUE:	60		46		78	

1 A - Number of head; B - Estimated value, corrected to the nearest dollar.

Source: Field-surveys (App. IV, Q.8), 1970-71.

regional levels of subsistence fish production are shown in Table 4.12. The average Ha'apai household consumed more than double the amount of sea-foods consumed by the average household in both Tongatapu and Vava'u. This is a reflection of several factors: the fishing grounds in the Ha'apai region were greater in areal extent, richer, and more accessible than those found in Tongatapu and Vava'u. Moreover, the Ha'apai inhabitants spent a proportionately greater amount of time in fishing than did those of the other two regions.

Handicrafts:

Woven pandanus and coconut-leaf mats of various kinds are the basic items of household furniture. Tapa-cloth, made from the bark of the paper mulberry tree is also an important handicraft of the Tongan household; it is the Tongan blanket and an item of great ceremonial value. Possession of these items is considered a 'must' by every Tongan woman.

The manufacture of these mats and tapa-cloth is one of the principal productive tasks of women. Apart from the manufacturing of these handicrafts, their production also involved planting and tending groves of pandanus and paper mulberry trees. Practically all women in the surveyed households took part in these activities, both individually and as a group (kautaha lalanga, kautaha koka'anga). Most of the handicrafts produced were for household uses, but an increasing amount was entering the market. Regionally, there was not much difference in the amount and type of handicrafts produced (Table 4.12).

Patterns of cash production

Copra and bananas were the main commodities produced for market sale by the average household. But significant quantities of yam, talo, kumala and other food crops also entered the market, as did livestock, fish and handicrafts.

Copra:

Coconuts were the major cash crop. Thus, in Tongatapu copra¹ accounted for 45 per cent of the total cash crop income per household, while in Ha'apai and Vava'u the corresponding percentages were much higher, being 76 and 77 per cent respectively (Table 4.11). Indeed, of all the cash commodities produced by the Tongan household, copra was the most important single product. As Table 4.11 reveals, household earnings from copra were especially significant in Ha'apai and Vava'u; for the majority of the households in those two regions, copra was by far their major source of cash. Moreover, in the more isolated and less accessible villages of those regions, copra was the only source of cash income for the vast majority of the households.²

The regional levels of household copra production, as measured by the cash incomes derived from it,³ are shown in Table 4.11. It can be seen that the average figure is

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- 1 Including whole coconuts sold to the desiccated coconut factory at Haveluloto (Nuku'alofa).
 - 2 Copra is a product which can be stored for reasonably long periods, as long as adequate storage facilities are provided. Its marketing does not, therefore, depend on regular and speedy shipping services as do bananas and other perishable produce.
 - 3 The average price paid to copra producers was about \$102 per ton, and was the same throughout Tongatapu, Ha'apai, Vava'u and 'Eua. For the Niuatoputapu and Niuafu'ou producers the price was reduced by \$5.00 and \$7.50 per ton respectively, because of additional freight and handling charges involved in shipping copra to the main export centres of Neiafu and Nuku'alofa.

Table 4.11: Average Patterns of Household
Cash Production

Product	Tongatapu			Ha'apai			Vava'u		
	A ¹	B	C	A	B	C	A	B	C
<u>Agriculture:</u>									
Copra	68	13	35.6	53	12	50.5	87	21	71.3
Bananas	42	8	22.0	14	3	13.3	16	4	13.1
Other produce exported	15	3	7.9	-	-	-	3	1	2.5
Other produce sold locally	25	5	13.1	3	1	2.9	4	1	3.3
Livestock	13	2	6.8	2	1	1.9	3	1	2.5
Sub-total	163	31	85.4	72	17	68.6	113	28	92.7
Handicrafts	18	3	9.4	10	2	9.5	5	1	4.1
Fishing	10	2	5.2	23	5	21.9	4	1	3.3
Sub-total	28	5	14.6	33	7	31.4	9	2	7.4
TOTAL:	191	36	100.0	105	24	100.0	122	30	100.1

1 A - Estimated value, corrected to the nearest dollar per household; B - Estimated value per consumption unit; and C - Percentage of total estimated value.

Source: Field-surveys (App. IV, Q.16), 1970-71.

highest for Vava'u and least for Ha'apai. The regional variations in levels of household copra production were due to a number of factors such as acreages planted in coconuts, the density of the plantings, attention given to the plantation, the amount consumed by the household, and damage caused by rats and rhinoceros beetles. Of these factors, the acreage of land owned and the density of plantings were the most significant in explaining the regional variations in production.

In all three regions there was a relatively high correlation (ranging from $r = .71$ to $r = .78$)¹ between level of copra production and the amount of land owned. Analysis of data from the village case-studies also showed that generally the larger the amount of land a household owned the higher was its level of copra production. The density of plantings also accounted for variations in levels of production, for while virtually all of the holdings surveyed were planted with coconuts, some were only thinly covered while others were heavily planted. Generally, the holdings in Ha'apai were the most heavily planted. Only small proportions of the plantations visited in that region were thinly planted or left clear of coconuts. On the other hand, many holdings in central and eastern Tongatapu and parts of Vava'u were only sparsely covered. These regional differences in the density of planting are reflected in the copra yield per acre which was highest in Ha'apai with approximately 4 hundredweight per acre, while the corresponding figure for both Tongatapu and Vava'u was about 3 hundredweight.

1 Calculated by Spearman's rank correlation method.

Throughout the three regions, however, and indeed throughout the whole of Tonga, coconut plantations were characterised by low productivity. For 18 well-planted holdings, 6 in each region, for which the total amount of copra produced could be determined with relatively high accuracy, the average production in 1970 was 6.8 hundredweight per acre,¹ a rather high yield compared with the overall average of 3 to 4 hundredweight noted above. Some of the reasons for the low copra productivity have already been adequately discussed by Maude (1965, 146-149). One of the more important reasons is that underlined by the Director of Agriculture in his comments on the coconut industry in Tonga. The Director observed that probably the main factor in the reduction of copra exports in recent years was "LAZINESS. Laziness in keeping plantations clean, and so allowing bush to grow, which not only competes with the coconut and thus reduces its production potential but also permits a comfortable habitat for rats, hides Rhinoceros Beetle breeding sites and of course makes it difficult to collect fallen nuts, and because of this they are often left to rot".²

Bananas:

The figures contained in Table 4.11 also indicate the amount of bananas, as measured by cash returns, exported³ by

1 The average for each region was 6.7 hundredweight for Tongatapu, 6.8 for Ha'apai and 6.9 for Vava'u.

2 The Tonga Chronicle, Aug. 21, 1970, p.5.

3 All bananas exported are marketed through the Produce Board, a government-sponsored body. The growers were paid an average of \$1.65 per case in Tongatapu and Vava'u, and an average of \$1.50 in Ha'apai, each case weighing approximately 72 lbs.

the average regional household. It can be seen that the highest average was recorded for Tongatapu, an average that is three times that for Ha'apai and over twice that for Vava'u. The regional variations in household banana exports were due not so much to variations in area of land owned, as most Tongans could easily borrow land for growing bananas and other relatively short-term crops, but to differences in accessibility and regional export quota allocations.

Although there was some positive correlation between size of landholdings and level of banana production, the relationship was far from consistent. Indeed, a number of the households with large holdings produced comparatively fewer bananas than those with small-sized holdings. Detailed examination of relevant data from 25 growers from the village case studies (12 from Niutoua, 6 from Holopeka and 7 from Ta'anea) confirmed the argument made above.

Relatively good roads and transport facilities in Tongatapu meant that most, if not all, of the growers in that region could export bananas, if they so desired. By contrast, many of the growers in Ha'apai and Vava'u were hampered from exporting bananas, and other perishable produce, by transportation difficulties. Thus, whereas approximately 90 per cent of the Tongatapu farming household exported bananas at some stage during the period under study, only 45 per cent of the households in Ha'apai managed to do so, and the corresponding figure for Vava'u was 52 per cent. As can be seen from an examination of Figure 4.1, no bananas (or other perishable produce) were exported from the more isolated and less accessible villages of Ha'apai and Vava'u. This shows that unless transport facilities are highly

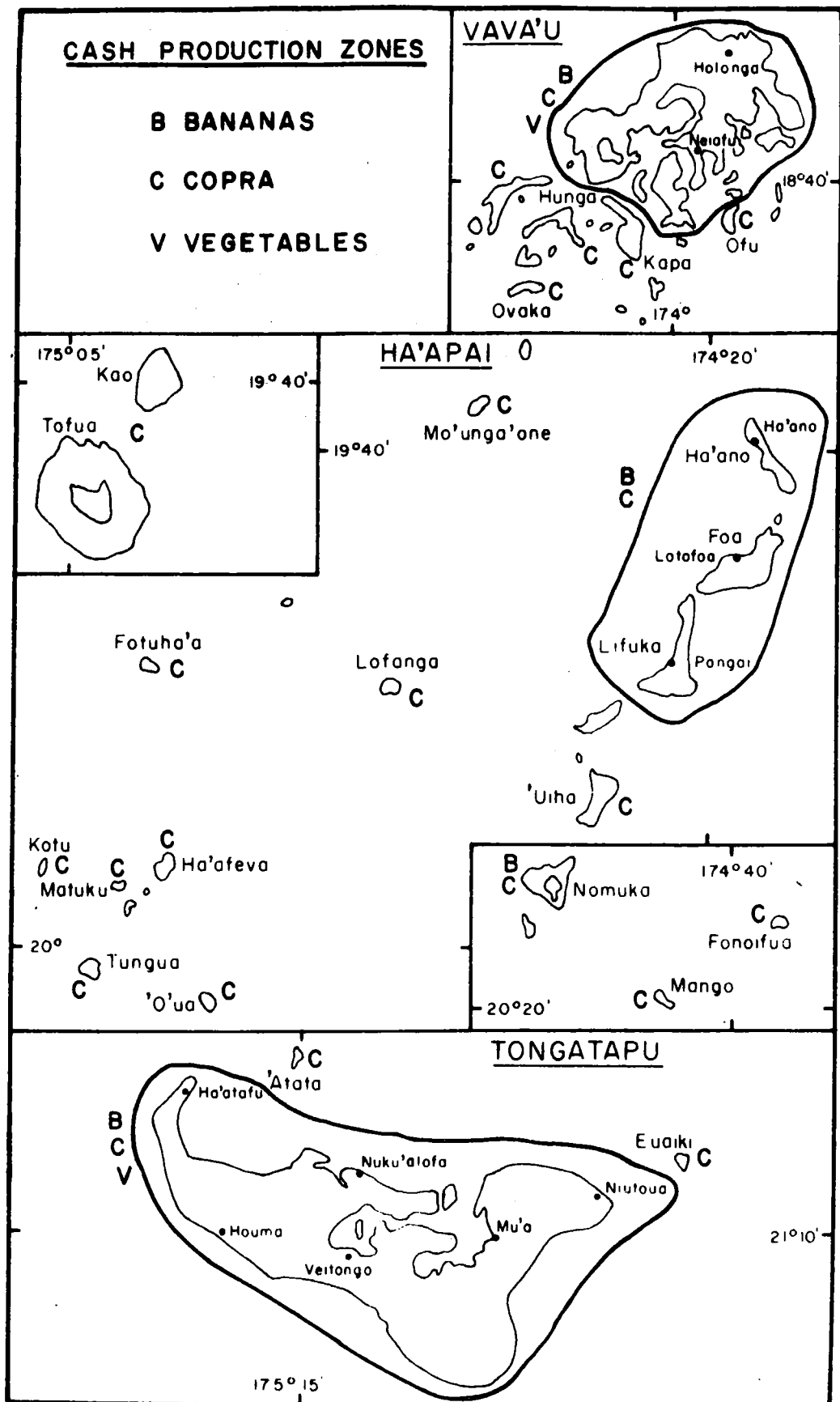


Figure 4.1: Cash Production Zones

Source: Field-surveys (1970-71)

efficient, trade will become more homogeneous with increased distance from the main export port.¹

The regional allocations of the banana export quota which normally favour Tongatapu also contributed to regional disparities in household banana production. Thus, in 1970, 85 per cent of the total banana export originated in Tongatapu while only 11 per cent came from Ha'apai and Vava'u.² Tongatapu's share of the annual export quota has invariably remained above the 80 per cent mark. The disproportionately small proportions of the export quota allocated to the Ha'apai and Vava'u regions meant that in order to keep transport costs down supplies there had to come from the more accessible villages. This further increased the 'economic', as well as the 'socio-psychological', distance of the more remote places.

An important feature of the banana industry during the period under survey was that the monthly export quotas were not filled in nearly all shipments. This situation was ascribed by many growers largely to the incidence of the leaf streak disease. Although this disease was an important element in the unusually low level of banana production, lack of proper communication and an unsatisfactory relationship between the growers and the Produce Board and the Department of Agriculture seemed to be as equally, if not more, important.

1 Similar findings have been made by Ward (1964) for Fiji, and by Couper (1967, 290-292) for both Fiji and Tonga.

2 From an all time record volume of 614,403 cases in 1967, banana export production decreased to 536,160 cases in 1968, then slumped to 210,985 cases in 1969 and to 142,616 cases in 1970.

Many growers complained to the present author of instances of unsatisfactory relationship with officials of the Produce Board and the Agriculture Department. They also argued that they should be getting more than the 50 per cent of the f.o.b. prices for bananas which they were receiving. The unhappy relationship between the growers and the Produce Board suffered a severe blow in 1967 when the Board unwisely decided to reduce the then 20 cents bonus for each case of bananas exported to only 2 cents. The growers were bitterly disappointed and, consequently, for the first time in its history, Tonga witnessed a protest march by the growers.

Lack of confidence in the Produce Board has been mounting in recent years, especially since 1969 when it was publicly disclosed that the Produce Board had suffered financial losses exceeding \$200,000 due to mismanagement. Many growers subsequently stopped planting bananas altogether. They asked: "Why should we labour so hard if a good proportion of that labour's rewards goes into other people's pockets?" They were also complaining bitterly at the fact that this and other examples of financial mismanagement have not been dealt with properly by making those responsible pay the appropriate penalty. There is in addition a growing suspicion among the growers that the Government, in promoting agricultural production, is interested primarily in the revenue it will derive from export duties, levies, etc. imposed on products exported, and that the promotion of the farmers' material welfare is only a secondary concern.

While these factors have been important causes of the low banana output in recent years, they should not be allowed to detract from other prohibitive factors such as the

inability or even reluctance on the part of many of the growers to persevere in combating the leaf streak disease. According to some of the more successful banana producers, the disease could easily be brought under control by a little "extra hard work, patience and perseverance ... the disease is more in the mind than in reality". Thus, in spite of the fact that the Produce Board provided assistance to the growers in combating the disease by supplying D.D.T. dusting powder free of charge and chemical fertilizer at cheap rates, the majority of the growers did not avail themselves of this assistance.

Secondary cash crops and livestock:

In addition to copra and bananas, certain quantities of other crops such as yams, talo, plantains, watermelons, and pineapples were offered for export. As Table 4.11 indicates, the bulk of these exports was from Tongatapu and none at all from Ha'apai. The export quotas allocated by the Produce Board were overwhelmingly in favour of the Tongatapu growers. The export quotas for these commodities, however, were well below the level of what could be exported. A great many growers, in all three regions, stated that they wished there was a larger and assured market for these commodities.

Local sales of these secondary cash crops and livestock also earned the average household some cash income, and the income accrued therefrom was highest in Tongatapu. A considerable amount of produce was sold at the Nuku'alofa market which opened daily, with Saturday being the busiest day. It should be noted that the income from local sales of agricultural produce yielded the average Tongatapu household more income than that derived from bananas. This demonstrates

the greater opportunities for earning cash, through the Nuku'alofa market,¹ available to the Tongatapu growers compared with those open to farmers in Ha'apai and Vava'u. There was no produce market in Ha'apai and the local sales of agricultural products was very limited indeed. In Vava'u there was a small market at Neiafu which functioned mainly on Saturdays and 'boat days'. The Neiafu market was always oversupplied and consequently the prices of produce sold there were generally about 25 to 50 per cent lower than those at Nuku'alofa.

Pork, chicken and beef were the main kinds of livestock products sold locally; and the income derived therefrom was highest in Tongatapu. There was a fairly keen demand in Tongatapu, but the required supply was, for one reason or another, rarely forthcoming. For three successive Saturdays, the present writer observed how all fresh pork and beef offered for sale at the Nuku'alofa market were sold out in a couple of hours, and many customers missed out altogether.

Fish:

Apart from being an important item in the household subsistence economy, fish also made some contribution to the monetised sector. The contribution of fish production to household cash income is indicated in Table 4.11. It can be seen that income from this source was highest in Ha'apai where it was more than twice the corresponding figure for Tongatapu and more than five times that for Vava'u.

1 The significance of the Nuku'alofa produce market in this regard has been emphasised by Walsh (1964, 183-184) and Hardaker (1970, 44).

The comparatively larger cash return from fishing in Ha'apai was due not to local sales which were very limited, but to the marketing opportunities provided by the Australian firm to which reference has already been made. This firm offered to buy all the fish that the inhabitants of a number of Ha'apai islands could produce, and, for this purpose, had installed two deep-freezers - one in Ha'afeva and the other in Pangai. The level of fish production, however, has never been anywhere near the desired volume, in spite of the fact that, apart from copra and bananas, there were very few opportunities for earning cash. Many of the Ha'apai fishermen complained that the prices they were getting for their catches were inadequately small. They were paid 10 cents per pound for ordinary fish and 15 cents per pound for crayfish. Because they had been told that Fathom Fisheries Ltd. received up to \$3 per pound from exporting crayfish, the fishermen felt that they were being exploited. Many of them stopped selling fish to the firm once they learned of such reported discrepancies.

Fish production in Tongatapu and Vava'u was all for local sales, but was never in sufficient quantities to meet the demand. In fact there existed in all three regions great potential for greatly increased fish production. An organised marketing system, higher prices, and greater availability of suitable fishing equipment would go a long way towards increasing fish production. The above-mentioned Australian firm wanted more fish, and there was also an acute shortage of fish in Nuku'alofa, judging by the rapidity with which a catch would sell there.

Handicrafts:

Handicrafts such as floor mats, table mats, baskets, tapa-cloth, and so on made an important contribution to the cash income of the average household. This contribution was highest in Tongatapu and lowest in Vava'u (Table 4.11). Most of the handicrafts were sold to tourists on cruise-ship days, though some were also sold to Tongan exporters who would then export them to Fiji, New Zealand, Australia and even Hawaii and the United States. A small amount was sold to Tongans. Practically all the tourist cruise-ships call only at Nuku'alofa, with a few a year at Neiafu, and none at all at Pangai. The Ha'apai women, noted as among the best makers of handicrafts in Tonga, managed, however, to send a good proportion of handicrafts to relatives in Tongatapu who would then sell them to tourists. Late 1970 and early 1971 was a particularly good period for the handicraft industry; during the months of November, December, January and February there were at least 3 cruise-ships calling at Nuku'alofa each month. Not a few women earned as much as \$20 to \$30 each time a cruise-ship called.

Total production

Estimates of average total household production¹ are presented in Table 4.12. It can be seen that the overall average level of household production was highest in Tongatapu and least in Ha'apai, although the difference

1 The purpose of adding together imputed values of subsistence output and estimated values of cash production, two different units, is simply to allow similar estimates for the three regions to be compared.

Table 4.12: Average Patterns of Household Gross
Production

Product	Tongatapu			Ha'apai			Vava'u		
	A ¹	B	C	A	B	C	A	B	C
<u>Agricultural:</u>									
Subsistence output	489	91	61.0	314	71	50.0	396	94	61.4
Cash sales	163	30	20.3	72	16	11.5	113	27	17.5
Payments in kind	20	4	2.5	28	6	4.5	20	5	3.1
Sub-total	672	125	83.8	414	93	66.0	529	126	82.0
<u>Fishing:</u>									
Subsistence output ²	64	12	8.0	140	32	22.3	59	14	9.1
Cash sales	10	2	1.2	23	5	3.7	4	1	0.6
Sub-total	74	14	9.2	163	37	26.0	63	15	9.7
<u>Handicrafts:</u>									
Subsistence output ³	37	7	4.6	41	9	6.5	48	11	7.4
Cash sales	18	3	2.2	10	2	1.6	5	1	0.8
Sub-total	55	10	6.8	51	11	8.1	53	12	8.2
TOTAL:	801	149	99.8	628	141	100.0	645	153	99.9
Subsistence component	610	113	76.2	523	119	83.3	523	124	81.1
Cash component	191	35	23.8	105	24	16.7	122	29	18.9

1 A - Estimated value per household; B - Estimated value per consumption unit; C - Percentage of total estimated value.

2 Includes payments in kind.

3 Includes payments in kind.

Source: Field-surveys, 1970-71.

between the Ha'apai average and that for Vava'u was relatively small. It can be also seen that in all three regions the subsistence component made up no less than three-quarters of total production. Cash production was, like total production, highest in Tongatapu and least in Ha'apai.

On a per consumption unit basis, however, household production was highest in Vava'u where, for every consumption unit, goods to an estimated value of \$153 were produced compared with \$149 and \$141 for Tongatapu and Ha'apai respectively. Subsistence production per household was highest in Tongatapu but least there and largest in Vava'u on a per consumption unit basis. However, with regards to cash production, the average figure for Tongatapu was higher than that for the other two regions, both on a per household and on a per consumption unit basis.

The significance of agricultural output in the total household production is clearly underlined by the figures set out in Table 4.12. It comprised 66 per cent of household production in Ha'apai and no less than 80 per cent of the same in Tongatapu and Vava'u. The dominance of the subsistence component of agricultural output is also obvious. Thus subsistence output made up 76 per cent of total household agricultural production in Tongatapu, and the corresponding percentages for Ha'apai and Vava'u were 83 and 81 respectively. The percentages for Ha'apai and Vava'u are similar to those obtained by Hardaker (1970, 47), but there is a difference of 10 per cent with respect to the proportion for Tongatapu, a discrepancy which is probably due to sampling errors.

The comparatively greater dependence of the Ha'apai households on fish is also evident from Table 4.12. There

was more than twice as much fish produced and consumed in Ha'apai than in Tongatapu and Vava'u. The quantity of handicrafts produced was relatively similar in all three regions. They were manufactured largely for household use, though a small, yet increasing, amount was entering the market.

4.5: FACTORS AFFECTING PRODUCTION¹

It is evident from the preceding discussion that the average total household output in all three regions was still well below potential. Thus it was shown that only about 50 per cent of the total land area of the surveyed holdings was currently cultivated. It was also indicated that available labour was nowhere near being fully utilised. Capital resources were also more than adequate. Total production could, therefore, be increased considerably and maintained at a higher level without any undue pressure on the factors of production, without significant changes in production techniques, and without any major changes in social and economic organisation.² There must, therefore, be either a limited market demand for, or weak cash incentives to, further production, or even both. Evidence gathered suggested that household demand was the major factor affecting the level of subsistence production, while weak incentives in terms of low monetary rewards and

1 See Maude (1965) and Hardaker (1970) for further discussions of this topic.

2 A similar conclusion was arrived at by Lockwood (1971) in his study of four Samoan villages.

difficulties of transport were the main factors in the below-potential level of cash production.¹

Determinants of level of subsistence output

In an attempt to isolate the major factors that determined the level of subsistence agricultural output, a detailed survey was made of a number of relevant aspects of household production in 8 households in Niutoua and 6 households in each of Holopeka and Ta'anea. In selecting these households, an effort was made to ensure that the households chosen would be as representative as possible of the village household population. Thus, the households chosen were all farming households deriving over 80 per cent by value of their food needs from their own gardens, had no significant non-agricultural sources of income, and had average member sizes similar to those for the whole village.

An analysis of the data from these case-studies is shown in Table 4.13. It can be seen that in spite of a significant difference between the Niutoua average total output, on the one hand, and those for Holopeka and Ta'anea, on the other, there was little difference in terms of output per consumption unit. A simple correlation analysis performed on the data showed a close and consistent correlation ($r = .71$)² between household size and level of subsistence output. The variations in the amount of land held, in the

1 This finding lends support to Fisk's (1962, 1964) model of a primitive economy based on the proposition that level of production in a situation of 'primitive affluence' is limited by the ceiling that exists to demand rather than by any shortage of factors of production such as labour or land. But when regular contact is made with the advanced sector, the degree of participation in, or the level of production for, the market sector varies with the strength of the incentive to do so which in turn will largely depend on the effectiveness of linkage to the market. Lockwood's study (1971) of Samoan village economy has given empirical support to Fisk's model.

2 Product moment correlation coefficient.

Table 4.13: Subsistence Agricultural Output of
a Number of Selected Households¹ According to
Factors of Production

Item	Niutoua (Tongatapu)	Holopeka (Ha'apai)	Ta'auea (Vava'u)
Average size of holdings (acres)	7.0	5.3	8.3
Average no. consumption units per household	5.6	4.5	4.8
Average total household output by estimated value (\$)	434	353	379
Average no. farmers per household	1.3	1.0	1.1
Average value of agric. tools per household (\$)	8	5	7
Average output per acre (\$)	62.0	66.6	45.7
Average output per consumption unit (\$)	77.5	78.4	79.0
Average output per worker (\$)	333.8	353.0	344.5
Average output per unit value of agric. equipment (\$)	54.3	70.6	54.1

1 Eight households from Niutoua, and 6 each from Holopeka and Ta'anea.

Source: Field-surveys (village case-studies), 1970-71.

in the magnitude of labour available, and in the amount of agricultural equipment owned showed no marked or consistent influence on total output.

Further analysis of the data from these case-studies showed that within the range of 5 to 8 acres, the average range of holding sizes in Tonga, acreage had no significant influence on the level of subsistence output. The 20 holdings studied were grouped into two categories, one of those of 5 acres or less, and the other of those of larger sizes. The average levels of subsistence output in terms of estimated monetary values were then calculated. The results were \$387 for the smaller-sized holdings, and \$399 for the larger-sized ones, showing no appreciable differences.

Although no firm conclusion can be drawn from the results relating to such a small and non-random sample, the findings do lend support to the view stated above, namely, that variations in levels of subsistence output were determined largely by the level of household demand. Furthermore, evidence gathered showed that this demand was, in all three regions, of a magnitude that did not require full utilisation of all available productive resources.

Factors affecting cash production

In all the regions under study, and indeed throughout the whole of Tonga, the growth of cash cropping has been made possible by the "existence of a considerable margin of surplus productive capacity in the form of both surplus land and surplus labour over and above minimum subsistence requirements" (Myint, 1964, 44). Furthermore, combinations of land, labour and capital similar to traditional patterns

have been applied to most traditional crops; only the purpose was different, to earn money instead of producing for household consumption. Also, the skills required were possessed by most, if not all, of the farmers.

Productive resources:

In order to ascertain the more important determinants of level of cash production, correlation analysis¹ was performed on household level of income derived from agriculture and the level of factors of production employed. The analysis showed copra to be the only agricultural cash commodity the output of which had a relatively strong relationship with the amount of any of the three major productive factors; and that was with land resources. There was a positive correlation coefficient of $r = .73$ between the size of landholdings and income from copra; the greater the amount of land a household had the higher was the volume of copra produced. This relationship between income and size of holdings was not, as would be expected, strong if the holding was not held under secure tenure. Households with no holdings of their own generally produced no copra at all. As to cash income from other agricultural commodities, it was not so much the amount of productive resources a household had as the location of that household with respect to marketing opportunities which influenced the level of income.

The relatively strong relationship between copra output and size of landholding occupied again comes out clearly in Table 4.14 which shows, among other things, that the level

1 Spearman's rank correlation method.

**Table 4.14: Agricultural Cash Income Per Household
According to Size of Holding¹**

Item	Tongatapu			Ha'apai			Vava'u		
	A ²	B	C	A	B	C	A	B	C
No. households	30	90	14	35	10	3	16	42	7
Average acreage	4.2	7.7	13.7	3.4	8.2	12.5	5.8	8.3	14.2
	<u>Income (\$)</u>			<u>Income (\$)</u>			<u>Income (\$)</u>		
Copra	32	65	99	27	51	84	41	79	113
Banana	29	53	44	6	17	19	9	22	17
Other produce for export	4	8	5	-	-	-	-	4	4
Produce sold locally	22	47	39	2	1	2	3	3	4
TOTAL AVERAGE INCOME	87	173	187	35	69	105	53	108	138

1 Excluding households that had access to no land.

2 A - Less than 6 acres; B - At least 6 but less than 9 acres; C - 9 or more acres.

Source: Field-surveys, 1970-71.

of copra output varied according to the size of landholding occupied. Cash income from bananas appears, at first sight, to vary with the size of landholdings; in all three regions the group of households with the smallest holdings had the lowest level of banana export. This variation did not, however, extend to households with large-sized holdings. In Tongatapu and Vava'u the middle-sized holdings had a higher level of banana output than did the largest-sized holdings, and in Ha'apai the difference in output between the two larger-sized groups of holdings was insignificant. A more detailed examination of the households with holdings of less than 6 acres showed that in Tongatapu about one-third of them were households which also derived cash income from paid employment. Moreover, there were proportionately fewer households in this group compared with those in the other groups that exported bananas as well as sold produce locally during the period under consideration. This perhaps contributed to the low level of banana production in those groups of households. In Ha'apai and Vava'u those households that exported the least amount of bananas or no bananas at all were mainly those that either chose, for one reason or another, not to export more or could not do so due to problems of transport.

Households with no land of their own generally had much lower cash crop incomes than those with their ownland. Thus, in this study households with no land had slightly more than half of the per consumption unit cash crop income of those owning $8\frac{1}{4}$ acres of land. This is similar to the result arrived at by Maude (1965, 155-56) in a survey of four Tongatapu villages in 1961.

Interregional comparison of returns to resources used, employing simple indices of productivity, showed that the average total return per unit area of land occupied and per unit of expenditure was highest in Tongatapu (Table 4.15). Significantly, the productivity per unit of area was higher in Ha'apai than in Vava'u. It can also be seen that the ratio between cash income and expenditure was highest in Ha'apai and lowest in Tongatapu. This suggests perhaps that farm income in Tonga does not necessarily, at least as far as the ordinary small-scale farmer is concerned, rise with increase in expenditure.

Motivation and technology:¹

Regional variations in agricultural output may also be explained in terms of differences in motivations, technology and entrepreneurship.² Thus, the Tongatapu growers appeared to be 'more motivated' to producing more and of a greater variety of produce than did those in Ha'apai and Vava'u. This was due in part to the greater expectation the Tongatapu farmers had of being able to get some returns for their produce, an expectation which, in turn, was a function of availability of marketing opportunities.³ In terms of technology, there were proportionately more growers in Tongatapu using 'new' tools or processes in farming than in the other two groups. Thus, whereas 67.9 per cent of the

1 By technology is here simply meant the use of 'new' tools and/or processes in farming. Thus, the use of ploughs, tractors, chemical fertilisers, insecticides, etc. comes under this definition of technology.

2 See Chapter 6.1 for a discussion of entrepreneurship.

3 It is pointed out in Appendix I.iii that people will, in general, expend extra energy and resources when there is at least some expectation of adequate returns.

Table 4.15: Some Measures of Household
Agricultural Productivity

Measure or Productivity	Tongatapu	Ha'apai	Vava'u
	<u>\$</u>	<u>\$</u>	<u>\$</u>
Income return (I)	672	414	529
Income/Area return (I/A)	88.4	82.8	63.7
Income/Labour return (I/L)	4.1	3.4	3.6
Income/Expenditure (I/E)	48.0	207.0	105.8
Income/Total Expenditure (I/E + LC)	4.0	3.3	3.4

Notes: I - Average household agricultural output by value.

A - Average area of landholdings.

L - Labour used, in mandays, one man-day being the equivalent of 8 working hours.

E - Average cash expenditure.

LC - Labour cost calculated at \$1 per man-day.

Source: Field-surveys, 1970-71.

farming households in Tongatapu used chemical fertilisers and/or insecticides and pesticides during the period studied, only 27.1 and 36.9 of the comparable households in Ha'apai and Vava'u respectively used such chemicals. Moreover, there were proportionately more growers in Tongatapu that received advice and assistance from the appropriate government departments than was the case in Ha'apai and Vava'u. Thus, while over half of the Tongatapu growers had contact with these official bodies in one form or another, slightly over one-quarter and one-third of the growers in Ha'apai and Vava'u respectively had such contact during the period under investigation.

The level of education achieved showed no significant influence on agricultural productivity in all three regions. A simple correlation analysis performed on the level of education achieved and the level of agricultural output indicated no strong or consistent relationship between these two factors. Indeed, detailed examination of the relevant data revealed that a number of the more successful commercial farmers were among those with least formal education. This situation is not entirely unexpected, for, as noted in Chapter 3.2, there is an unrealistically heavy academic bias in the school curricula. Teaching of elementary agriculture is minimal,¹ to say the least. With the majority of children leaving school having to depend on the land for their livelihood, there is an urgent need for adjustment of the education system to place more emphasis on agriculture.²

1 A similar observation has been made by Cumberland (1962, 390) for some of the other Pacific countries.

2 This recommendation is again made in Chapter 7.3, though in a different context.

Marketing opportunities:

Regional differences in levels of agricultural output may be explained only partly in terms of availability of resources, motivation, technology and entrepreneurship; a more important explanatory factor is the availability of marketing opportunities. That differences in marketing opportunities largely accounted for regional differences in the level of cash production (excepting copra, of course) is evident from a comparison of the regional figures in Table 4.14. It can be seen that the Tongatapu households in all these three groups of holding-size, had comparatively higher income levels than the corresponding households in Ha'apai and Vava'u. Indeed, the Tongatapu household group with the smallest-sized holdings produced more bananas, 'other produce for export', and produce for local sales than did the Ha'apai and Vava'u household groups with larger-scale holdings. However, when total agricultural income is considered, it was generally the case that the larger the size of the landholding the higher the level of income, a relationship that was influenced in no small way by that between copra output and area of landholding.

Obstacles to increased production

But what did the growers themselves regard as the major factors limiting production? Answers to the question "What were the major factors limiting increased production?" are summarised in Table 4.16. One of the most interesting points that emerged from discussions relating to this question was that practically all of the growers associated

Table 4.16: Obstacles to Increased Household
Production¹

Obstacle	Tongatapu	Ha'apai	Vava'u
	<u>%²</u>	<u>%</u>	<u>%</u>
Land factors	14.2	16.7	9.2
Pests and diseases	17.2	16.7	15.4
Low prices	26.1	6.3	13.8
Inadequate marketing opportunities	27.6	31.3	32.3
Transport difficulties	2.2	18.8	18.5
Demands of obligations	2.2	2.0	-
Nothing in particular	10.4	8.3	10.8
	99.9	100.1	100.0

1 As perceived by the household heads interviewed.

2 Percentage distribution of household heads according to the set of obstacles they regarded as the most significant.

Source: Field-surveys (App. IV, Q.13), 1970-71.

increased production with cash cropping. The growers' main concern was cash crop production. To them there was no obstacle to increased subsistence output; household requirements determined the level of output. The following discussion, therefore, relates mainly to cash production.

Inadequate marketing opportunities:

An examination of Table 4.16 reveals that in all three regions inadequate marketing opportunities were perceived as the most serious obstacle to increased production. The growers who stated this factor as the most serious impediment to increased production indicated that they could, with the existing resources, easily double their output if there was a market for it. Many of the growers in Ha'apai, for example, referred to the amount of bananas they had exported since they were given the chance in 1964. Prior to 1964, Ha'apai growers were not given a share in the banana export industry largely because of transport difficulties. But provision of better shipping services beginning in 1964 meant that the Ha'apai growers were able to be given an export quota which they readily filled.

There were, however, many cases in which this obstacle was in fact more apparent than real. A considerable number of growers, for instance, could, with 'a little more hard work', have easily improved upon their current output of copra and bananas, but failed to do so. Strong evidence existed to suggest that although insufficient marketing opportunities constituted a very important hindrance to

increased production, factors such as lack of motivation, inability or reluctance to do sustained work, and the existence of a state of 'primitive affluence', were also significant in determining the level of household production.

Transport difficulties and low prices:

As would be expected, transport difficulties were regarded as a hindrance to increased output mainly by Ha'apai and Vava'u growers, especially those in the more isolated localities. Only 2 per cent of the Tongatapu growers considered transport problems as obstacles to increased production, in contrast to 19 and 18 per cent in Ha'apai and Vava'u respectively.

Low prices were another factor which was stated to be a significant obstacle to increased production. Not only were the prices at the local market "too low", but also the returns from the commodities exported were considered by the growers to be inadequate. Thus the copra producers were, not unlike the banana growers, paid only about half of the f.o.b. prices obtained by the Copra Board, not to mention the marked fluctuations in the world prices for copra. Even worse was the lot of those farmers who not infrequently obtained very little or even nothing at all in return for their output of water-melons, tomatoes and other perishables due to transport difficulties, low prices or restricted export quotas. Understandably, very few growers with limited resources would persist in producing more if they had cause to suspect that their extra efforts and expenses might not yield adequate returns.

Low and fluctuating prices, in addition to irregular shipping, vagaries of markets and consequent wastage, hurricanes and so on have forced many growers to associate "cash cropping with notions of risk and insecurity" (Johnston, 1967, 109). Discussing economic incentives for agricultural development in Tonga, Hardaker (1970, 64) argued that "by far the simplest and most direct way of encouraging agricultural development would be to offer substantially higher prices for agricultural produce. Over the period of a few years this would almost certainly result in a large increase in agricultural output".

Pests, diseases and land problems:

Pests and diseases, which in this context referred almost exclusively to the scab moth and the leaf streak disease which affected bananas, were also a problem, though their direct effects ~~seemed~~ actually less than what many growers made them out to be. Under land factors are included insecurity of tenure and inadequate size of holdings. These problems were, as might be expected from the previous sections, most widespread in Ha'apai, particularly in the smaller and more densely populated islands. Physical factors such as soils, topography and climate were considered by most as only of minor importance.

Demands of obligations:

'Demands of obligations' was perceived as an obstacle to increased production by only 4 household heads. This seems surprisingly low in view of the often-expressed opinion that demands of various traditional obligations act as a deterrent to increased output. Maude (1965, 164), for example,

has noted that "many men interviewed considered the burden of obligations to be the major factor retarding their progress".¹ However, observations made and discussions held in the course of the field work suggested that obligations to kinsmen, neighbours, persons of high rank, and so on, can and do serve, as they did in the past, as incentives to produce more than day-to-day household requirements. In the words of one household head, "we have to have more food and livestock than we actually need in this household, for there are many obligations we have to fulfill. It would be really fakamā, if we cannot meet our obligations to the siasi, hou'eiki and fonua. This is something that my wife and I always tell our children".

There is here no denying of the inhibitive effects that traditional obligations often impose on efforts at increased production. What is here suggested is that the evidence gathered in the course of the field-work appears to indicate that the often-mentioned negative effects of traditional obligations may be less inhibitive than they are often made out to be.

Unsatisfactory relationship between growers and government organisations:

Reference has been made to the significance of the unsatisfactory relationship between the Produce Board and the Agriculture Department, on the one hand, and the banana

1 Maude (1965, 164) also added, however, that compared with farmers in the neighbouring territories the "Tongan farmer may be able to achieve a greater degree of independence with respect to control over his own resources without having to contract out of his society".

growers on the other. The same could also be said of the relationship between the Copra Board and the copra producers.¹ Although none of the growers, when questioned, specifically mentioned this factor as an important obstacle to increased production, many of them nevertheless referred to it in general terms. The author believes that most growers would have emphasised this factor if they were certain that the information would not be used against them in any way. Open criticism of the Government or government departments is still considered socially undesirable.

The author believes that better communication between the growers and the government bodies with which they have dealings is essential for agricultural development. As Walsh (1967b, 121) has observed, "the people themselves are capable of greater economic activity and of adopting new methods if given clear incentives in the form of a definite market and if there is leadership and assistance from above". Better dialogue between these two parties will remove much of the misunderstanding which exists between them. Lack of adequate communication between the growers and the official bodies was most serious in Ha'apai and Vava'u where, as has been noted, the majority of the former had no effective contact with the latter.

Conclusion

This Chapter has examined the nature and extent of the major factors of production available to the average regional

1 The copra producers' confidence in the Copra Board suffered a severe setback when it was publicly disclosed in 1969 that the Board had, like the Produce Board, suffered losses exceeding \$200,000 due to mismanagement.

household, and also the composition and level of output that accrued from the utilisation of those productive resources. It was shown that although there were significant regional variations in productive resources, there was no critical shortage in any of the three study areas.

It was also shown that the main determinants of the patterns of production were the demand for the products concerned, the strength of the incentives to produce them and of market linkages. Subsistence production, for instance, which in general adequately supported the producing household, was determined very largely by the strength of the demand of that household and not by the amount of factors of production. The level of cash production, on the other hand, was influenced largely by ease of access to marketing opportunities, by the size of holding and the form of tenure under which it was held, and by the prospective returns from the sales of the products concerned. Another major factor affecting cash production was the unsatisfactory relationship between the growers and the official marketing bodies.

The main regional difference that emerged in the analysis of production was in the cash returns from the products sold. The cash return received by the average Tongatapu household was slightly under twice that received by the average household in Ha'apai and just over one and a half times of the Vava'u household. One of the major reasons for this variation was the relative strength of access to marketing opportunities. Another major reason for the regional variations was the degree of effective contact between the growers and the official bodies responsible for

encouraging the production and marketing of cash crops. This contact was noted to be least effective in Ha'apai and Vava'u.

CHAPTER 5: ECONOMIC ASPECTS OF DEVELOPMENT:

PATTERNS OF CASH INCOME AND EXPENDITURE

Although the majority of Tongans still grow and produce their own food in much the same way as they had done in pre-contact times, access to 'European',¹ or imported goods and services over a span of a century has altered the patterns of wants of the average Tongan household. Many 'European' products have now come to be considered necessities rather than luxuries; to obtain these commodities requires money, the major sources of which are the sales of cash crops and paid employment. Throughout the regions studied there was obviously a strong desire to acquire more money and the things it could buy, although the efforts required to acquire increased wealth did not always match the strength of the desire.² This desire for money can be measured by the responses given to a question which asked 300 informants to indicate agreement, partial agreement or disagreement with the statement that "the man who gets much money finds happiness". The vast majority (81 per cent) of the informants agreed with the statement, and thereby indicated their

1 In the context of this study, the term 'European' is used to describe something that is not normally produced by the Tongan household, but which is usually imported and sold for cash. The term 'non-indigeneous' is sometimes used in this context. Examples of such goods and services include watches, shoes, bread, sugar, electricity and reticulated water system. Admittedly this usage of the term has limitations, but, to the writer's knowledge, no completely satisfactory alternative has been proposed.

2 See Chapter 7.4 and Appendix I.iii.

identification of the accumulation of wealth with the attainment of happiness, 13 per cent agreed in part, and only 6 per cent disagreed. As one household head summed it up: "If you have plenty of money, you can have all the things you want, and thus live a happy life".

In this Chapter an attempt is made to evaluate the regional differences in household levels of living in terms of the average patterns of gross cash income and expenditure for the year under study. Consideration of savings and income 'adequacy' level and intraregional variations is also given.

5.1: PATTERNS OF CASH INCOME

An important feature of the households studied was that all of them obtained some cash income from one source or another during the period under consideration, even though the majority of them were basically subsistence producers. Equally as significant was the fact that cash incomes were generally low both absolutely and in relation to felt needs.

Major sources of income¹

Details of household cash income collected in respect of the 12 months survey period are summarised in Tables 5.1 and 5.3.² It can be seen that household income was derived

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- 1 For convenience, cash income and income are used interchangeably in this Chapter; the same applies to cash expenditure and expenditure.
 - 2 These Tables also throw into relief an aspect of the household economy about which very little firm and detailed evidence has hitherto been available, namely the composition and level of income derived from non-agricultural sources. The same can also be said of the data on expenditure patterns presented in Tables 5.5 and 5.6.

Table 5.1: Average Patterns of Household Income¹
According to Major Sources

Source	Tongatapu			Ha'apai			Vava'u		
	A ²	B	C	A	B	C	A	B	C
Sales of household output	191	86	41.2	103	24	67.4	122	29	64.9
Paid employment	242	45	52.2	38	8	24.8	51	12	27.1
Gifts and remittances	17	3	3.7	10	2	6.5	10	2	5.3
Other	14	3	3.0	2	1	1.3	5	1	2.7
TOTAL:	464	86	100.1	153	35	100.0	188	44	100.0

1 Gross income; the data on which this Table is based were obtained by asking the informants to estimate their incomes for the whole of 1970, and not by surveying throughout that period. Unless otherwise specified, this method was consistently employed in collecting the data on which the tables in this Chapter are based, and the results shown refer to the whole of the period under study.

2 A - Amount (\$) per household; B - Amount (\$) per consumption unit; C - Percentage of total.

Source: Field-surveys (App. IV, Q.16), 1970-71.

from a number of sources which consisted of four main components (Table 5.1): sales of household output such as agricultural commodities, fish and handicrafts; paid employment; operation of small retail stores, transport enterprises, etc.; and gifts and remittances from relatives and friends. Although this range of cash-earning opportunities was available in all three regions, the degree of availability varied considerably from one region to another. Moreover, remunerations from the various sources exhibited significant variations.

An examination of Table 5.1 reveals three important differences in regional patterns of household income. Firstly, and perhaps most significantly, the average cash income for Tongatapu households greatly exceeded those for both Ha'apai and Vava'u households, the Tongatapu average being more than twice the corresponding averages for the other two regions. On a per consumption unit basis, the regional differences were only slightly less. Secondly, paid employment, as a contributor to total average income, was much more significant in Tongatapu than in both Ha'apai and Vava'u. In fact, the contribution of paid employment in absolute terms to the average income in Tongatapu was greater than the total average in both Ha'apai and Vava'u. Thirdly, while the sales of household output took second place to paid employment in Tongatapu, it was the highest income earner in both Ha'apai and Vava'u. These averages reveal, however, only part of the picture and a more detailed analysis of the various sources and of the distributions over them of the surveyed households is necessary if the statistics contained in Table 5.1 are not to mislead.

One of the more important features of the income data collected is the fact that the majority of households in Tongatapu drew income from several sources as against those in Ha'apai and Vava'u which, in the main, had only 2 or 3 sources of income. Table 5.2 contains details of the distributions of households according to the number of sources from which they derived their incomes. It can be seen that there was a greater spread of the Tongatapu households over the various sources than was the case in either Ha'apai or Vava'u. Thus, whereas over 50 per cent of the Tongatapu households derived their cash incomes from at least 4 sources, less than 15 per cent of the households in both Ha'apai and Vava'u obtained their incomes from as many sources.

Before turning to a consideration of Table 5.3 it is useful to look at the ranges of incomes. The cash incomes of the surveyed households ranged from \$15 in Ha'apai to \$4170 in Tongatapu. Fortyseven (17.6 per cent) of all households received less than \$100 during the year under study; on the other hand, only 11 (4.1 per cent) had incomes of at least \$1,000, 9 of which were in Tongatapu and 2 in Vava'u. As shown in Figure 5.1, a greater range and higher levels of income were obtained in Tongatapu than in the other two regions. In the former region just under 50 per cent of the households had incomes of at least \$400, whereas in both the latter over half of the households each had income of less than \$200.

Table 5.2: Distribution of Households According
to Number of Sources of Income
(Percentage)

Number of Sources	Tongatapu	Ha'apai	Vava'u
One	4.6	12.2	16.4
Two	10.6	42.9	20.9
Three	25.8	30.6	47.8
Four	47.0	12.2	13.4
Five or more	11.9	2.0	1.5
TOTAL:	99.9	99.9	100.0

Source: Field-survey (App. IV, Q.16), 1970-71.

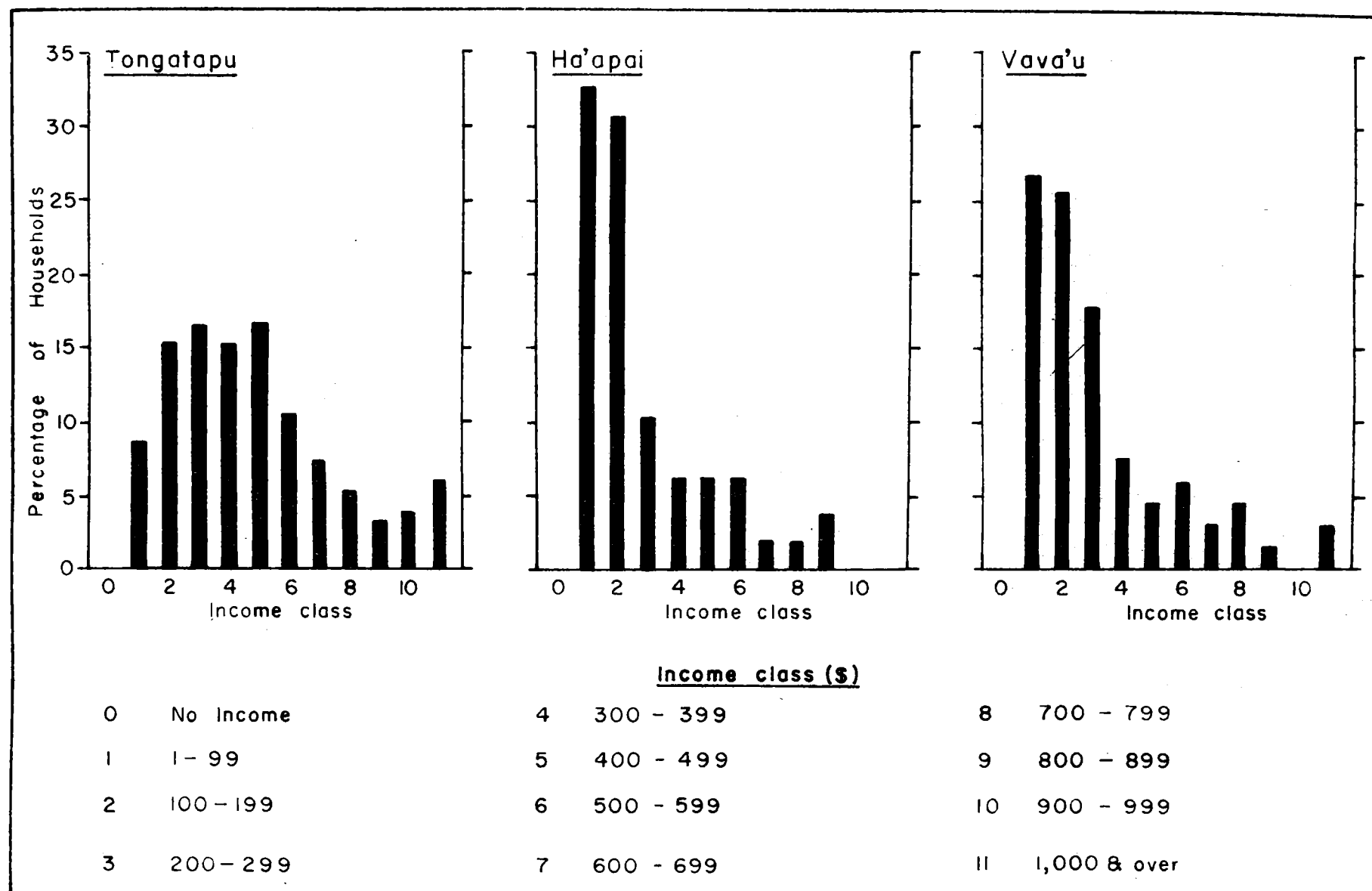


Figure 5.1: Distribution of Households According to Levels of Cash Income

Source: Field-surveys (1970-71)

Sales of agricultural commodities

Table 5.3 shows that average household income from the sales of agricultural produce was highest in Tongatapu with \$163, next in Vava'u with \$113, and lowest in Ha'apai with only \$72. But viewed in terms of their proportional contribution to total household income, the sales of agricultural products were more significant in Ha'apai and Vava'u than in Tongatapu. In Ha'apai and Vava'u 47.1 per cent and 60.1 per cent respectively of the average household income originated from this source, while in Tongatapu the comparable percentage was only 35.1 per cent. As indicated in the preceding Chapter, although there were a number of factors accounting for the regional differences in cash income from agriculture, there were two factors of special importance. One was the acreage of holding which was the main determinant of the level of copra produced. The other was the degree of access to marketing opportunities which largely determined what commodities, other than copra, a household could sell. These opportunities were, as already shown, comparatively more abundant in Tongatapu and least available in Ha'apai.

Although the sales of agricultural produce took second place to paid employment as the highest earner of average household cash income in Tongatapu, in terms of the number of households involved and the number that did derive the greater portion of their income from them, they were the most significant. Thus, 60.9 per cent of the households in Tongatapu obtained the largest proportion of their cash income from agriculture as against only 26.5 per cent, mainly in Nuku'alofa, that obtained the greater part of

Table 5.3: Average Patterns of Household Income

Source	Tongatapu			Ha'apai			Vava'u		
	A ¹	B	C	A	B	C	A	B	C
<u>Agriculture:</u>									
Copra	68	13	14.6	53	12	34.6	87	21	46.3
Bananas	42	8	9.1	14	3	9.2	16	4	8.5
Other produce	40	7	8.6	3	1	2.0	7	2	3.7
Livestock	13	2	2.8	2	1	1.3	3	1	1.6
Sub-total	163	30	35.1	72	17	47.1	113	28	60.1
<u>Other:</u>									
Fishing	10	2	2.1	23	5	15.0	4	1	2.1
Handicrafts	18	3	3.9	10	2	6.5	5	1	2.7
Paid employment	242	45	52.2	36	8	23.5	51	12	27.1
Gifts	6	1	1.3	4	1	2.6	4	1	2.1
Remittances	11	2	2.4	6	1	3.9	6	1	3.2
Other	14	2	3.0	2	1	1.3	5	1	2.9
Sub-total	301	55	64.9	81	18	52.8	75	17	40.1
TOTAL:	464	85	100.0	153	35	99.9	188	45	100.2

1 A - Amount (\$) per household; B - Amount (\$) per consumption unit; C - Percentage of total.

Source: Field-surveys (App. IV, Q.16), 1970-71.

their income from paid employment (Table 5.4). The importance of this source of income (i.e. agriculture) was even more marked in Ha'apai and Vava'u where 71.4 per cent and 86.5 per cent of the household respectively derived more than half of their cash earnings from it.

Sales of fish and handicrafts

As a source of household cash income, sale of fish was most significant in Ha'apai where it earned 15 per cent of the total average household income, compared with the corresponding percentages of 2.1 in both Tongatapu and Vava'u (Table 5.3). Again, as indicated in Table 5.4, Ha'apai had the highest proportion of households that derived the greater part of their income from fishing. The comparatively higher earnings and greater significance of this source resulted very largely from the marketing opportunities provided by Fathom Fisheries Ltd.

In absolute values, household cash income from the sale of handicrafts was highest in Tongatapu. Further, 4 of the households in Tongatapu that derived more than half of their cash income from this source, received an average of \$327 each. This is a large amount by Tongan standards, and the money came largely from sale of handicrafts to tourists. Many of the households told of ship days when their takings were as high as \$30 to \$50. As a contributor to the total average household income, however, it was most significant in Ha'apai where it was responsible for over 6 per cent of the total.

The differences in average regional household incomes from the sales of fish and handicrafts were due largely to

Table 5.4: Distribution of Households Over
the Major Sources of Income
(Percentage)

Source	Tongatapu	Ha'apai	Vava'u
Agriculture	60.9	71.4	86.5
Fishing	3.3	14.3	-
Handicrafts	2.6	-	-
Paid employment	26.5	10.2	11.9
Gifts and remittances	1.3	2.0	-
Other	5.3	2.0	1.5
TOTAL:	99.9	99.9	99.9

1 According to the source that provided the largest proportion of each household's cash income.

Source: Field-surveys (App. IV, Q.16), 1970-71.

the availability of marketing opportunities. This is clearly reflected in the fact that some Ha'apai households, because of the assured marketing opportunities provided by Fathoms Fisheries Ltd., were able to sell more fish and thus received more cash income from this source than those in Tongatapu and Vava'u.

Paid employment

As indicated earlier, money received from paid employment made up a considerable amount of the total household average income in all three regions. In Tongatapu, for instance, it contributed just over half (52.2 per cent) of the total average, while in Ha'apai and Vava'u the corresponding percentages were 23.5 and 27.1 respectively (Table 5.3). In terms of the number of households that did actually derive some income from wages, Tongatapu households were much better off. Altogether, 91 (60.3 per cent) of the Tongatapu households obtained some income from this source - 38 from full-time and 63 from casual or intermittent paid employment. By contrast, the comparable figures for Ha'apai and Vava'u were only 4 and 8 in the former (total 24.5 per cent) and 9 and 13 in the latter (total 32.9 per cent).

Hardaker's (1970, 49-50) study revealed that the percentages of households with some income from paid employment were 53.8 for Tongatapu, 18.8 for Ha'apai and 57.1 for Vava'u. The percentage for Vava'u seems rather large and may be the result of sampling errors.¹ Hardaker also found that

1 A similar point was discussed in Chapter 4.1.

in the Mid-Western Subdistrict of Tongatapu (which included Nuku'alofa) nearly 75 per cent of the household derived some income from paid employment on a reasonably regular basis; this "regularity was not duplicated in other parts of the Kingdom".

Full-time paid jobs were more numerous in the government than in the private sector, while intermittent paid work was generated mainly by the private sector. Geographically, paid employment was concentrated in the urban centre of each region. The scope within the villages for paid employment was very limited indeed.

About 80 per cent of the Tongatapu households' average income from paid employment came from full-time jobs, and the comparable percentages for Ha'apai and Vava'u were 95 and 88 respectively. The average returns to those households that actually derived some income from this source during the period under study were \$693 in Tongatapu, \$415 in Ha'apai and \$341 in Vava'u. The average household income from part-time paid work was also higher for the Tongatapu households which received \$112 compared with \$13 and \$27 in Ha'apai and Vava'u respectively.

A comparison of the average household cash return from full-time employment and that from cash cropping showed the former to be about 3 times the latter in all 3 regions. This situation partly explains why paid employment was generally preferred to farming. It is not difficult then to see why Tongans are so enthusiastic about an academic education which they see as the way to obtaining full-time posts either with the public service or in commerce. Moreover, as one informant observed, "the money

from paid jobs is more regular than that from any other source,¹ and the attached social status is far greater". It should be pointed out, however, that cash incomes from agriculture, especially in Tongatapu, are often greater than those from many paid jobs. What are needed in order to realise the full potential of the agricultural sector, and hence a rise in the average level of living, are, as indicated in Chapter 4, changes in attitudes, more equitable distribution and more secure tenure of land, more assured markets, better prices and more work on the land.

The regional differences in household involvement in paid employment were determined largely by the opportunities available. These opportunities were heavily concentrated in Nuku'alofa, although even there the demand was always far in excess of available opportunities. Indeed, a doubling of the current number of paid jobs, especially of the white-collar type, in all three regions would be taken up in no time.

Gifts and remittances

Another source of household cash income, which was difficult to deal with precisely, was the receipt of money from relatives and friends. In absolute terms it was, as might be expected, highest in Tongatapu and least in Vava'u. Contributions from relatives were much higher than those from

1 Finney (1967, 195-99) has observed that the Tahitians were increasingly preferring the 'fast money' received in weekly pay-packets in non-agricultural employment to the 'slow-money' gained in less regular payments for cash crops grown in rural areas.

friends, and approximately 70 per cent of the total receipts from this source comprised remittances from relatives especially in the United States of America and New Zealand.

Although cash received in this manner formed a fairly high proportion of the total income of some households, it was generally only of small amount. But the subsistence component of this kind of contribution was quite significant. It was estimated that the value of goods and services that the average Tongan household received a year from friends and relatives was in the order of \$200.

Other

The cash income source labelled 'Other' refers primarily to the operation of small retail stores and running of transportation services such as taxis, buses, and shipping. Both of the two sources were not widespread in the cash earning activities of the Tongan households. Nevertheless, they involved proportionately more households in Tongatapu than in the other two regions: 7 households in Tongatapu derived income from this source, 1 in Ha'apai and 2 in Vava'u, and the average income earned from this source by the households involved was approximately \$300 in Tongatapu, \$98 in Ha'apai and \$167 in Vava'u.

Increasingly, Tongans are wanting to run retail or transport enterprises. They see this as a good way of making "quick and easy money", apart from that of gaining social prestige. However, because of the low level of general education, the lack of managerial and accountancy training among Tongans, and the large number of people involved, there have been a considerable number of failures.

Moreover, the system of sale on credit was not conducive to proper business management, since the majority of debtors did not pay at regular intervals but when they had the necessary cash. Moreover, the degree of profit was discouragingly small due to lack of real wholesale supplies. Many of the retail stores were really mere agents for the larger stores such as Burns Philps and Morris Hedstrom. The demands made by social obligations of various kinds also imposed some adverse pressures on commercial enterprises.

Thus, a number of cash-earning avenues were available to the average Tongan household. But the avenues of making money actually pursued depended on such factors as the sources of cash available in each location, their levels of remuneration, and the ease with which the household was able to participate in a particular alternative. Accordingly, the households in the less accessible parts of Ha'apai and Vava'u concentrated on copra-making as there was no other alternative; those in the more accessible localities were able to add bananas as an additional source of cash; while in Tongatapu, the choices were far greater, enabling most households to derive income from a number of sources. Where there was a choice between paid employment and other sources of income, the former was invariably preferred.

It should be evident from the above discussion that the major factors accounting for differences in household income included the size of landholdings, availability of full-time paid employment, and the degree of accessibility to marketing opportunities. There was a relatively strong positive correlation between each of these factors and household income, especially when all the surveyed households

were considered together as one sample. But regionally, there were some important variations. In Tongatapu, for instance, the correlation between the size of landholding and income was rather low. In that region the correlation coefficient¹ was only 0.14, while in Ha'apai and Vava'u it was relatively high, being 0.50 and 0.63 respectively. This points to the relatively greater influence of acreage of landholding on income in Ha'apai and Vava'u where cash-earning opportunities outside agriculture were very limited. Again, the correlation between household income and accessibility² to marketing opportunities was comparatively higher in Ha'apai and Vava'u (0.56 and 0.63 respectively), than in Tongatapu (0.18). This low correlation coefficient for Tongatapu may be explained by the fact that variations in the degree of accessibility to marketing opportunities were quite insignificant, since all the households had relatively easy access to the Nuku'alofa market and port. By contrast, there were considerable variations in accessibility to marketing opportunities in the other two regions.

5.2: CASH EXPENDITURE PATTERNS

Although the Tongan household pattern of spending was very different from that normal in developed countries, such as New Zealand and Australia, and the cost of living much lower, the average income level was far from adequate.

Major categories of expenditure

Of the major categories of expenditure, food, clothing

1 Calculated by Spearman's Rank Correlation Method.

2 Expressed in terms of distance and ease of getting to the markets.

and other household sundries were the most important in all three regions. Next were those on services and traditional obligations; spending on these two categories was roughly similar in both Ha'apai and Vava'u with that on traditional obligations being slightly higher, while in Tongatapu expenditure on services greatly exceeded that on obligations. Outlay on equipment, consumer goods, housing and agriculture was the lowest of the major classes listed.

Details of the average patterns of regional household expenditure are presented in Table 5.5. It can be seen that the average level of expenditure varied from \$162 in Ha'apai to \$213 in Vava'u and \$448 in Tongatapu. A comparison of these averages with those of cash income (Table 5.1) shows a very high correlation, suggesting quite obviously that the magnitude of a household's expenditure varied according to that household's level of income. Thus, for the majority of households, their level of expenditure represented in the main their level of available income and not necessarily their degree of satisfaction.¹ It also represented the degree to which subsistence goods and services were being substituted for by purchased items. This was particularly true of foodstuffs, especially in the urban areas.

1 It must be admitted that the 'satisfying of Tongan desires' is a very complex affair, depending today, among other things, on the adoption of 'non-Tongan' values. Thus, the fact that Tongans save little may be explained not only by low income but also by the novelty of this institution. In comparison, the fact that Europeans save more may only mean that they value purchases in the future rather than because they have satisfied their current needs.

Table 5.5: Average Patterns of Household
Cash Expenditure

Item of Expenditure	Tongatapu			Ha'apai			Vava'u		
	A ¹	B	C	A	B	C	A	B	C
<u>Domestic:</u>									
Food	148	27	33.0	43	10	26.5	69	16	32.4
Clothing	23	4	5.1	10	2	6.2	14	3	6.6
Other commodities	55	10	12.3	29	7	17.9	23	5	10.8
Sub-total;	226	41	50.4	82	19	50.6	106	24	49.8
<u>Capital:</u>									
Agriculture	15	3	3.3	2	1	1.2	5	1	2.3
Equipment	4	1	0.9	2	1	1.2	3	1	1.4
Durables	5	1	1.1	2	1	1.2	3	1	1.4
Housing	13	2	2.9	2	1	1.2	4	1	1.9
Sub-total:	37	7	8.2	8	4	4.8	15	4	7.0
<u>Services:</u>									
Schooling	61	11	13.6	27	6	16.7	34	8	16.0
Local fares	15	3	3.3	2	1	1.2	2	1	0.9
Entertainment	37	7	8.3	6	1	3.7	9	2	4.2
Sub-total:	113	21	25.2	35	8	21.6	45	11	21.1
<u>Obligations:</u>									
Relations and friends	14	3	3.1	4	1	2.5	7	2	3.3
Funerals, weddings etc.	17	3	3.8	6	1	3.7	9	2	4.2
Church donations	35	6	7.8	22	5	13.6	28	7	13.1
Village Noble Government etc.	6	1	1.3	5	1	3.1	3	1	1.4
Sub-total:	72	13	16.0	37	8	22.9	47	12	22.0
TOTAL:	448	82	99.8	162	39	99.9	213	51	99.9

1 A - Average amount (\$) of expenditure per household; B - Average amount (\$) of expenditure per consumption unit; C - % of total expenditure.
Source: Field-surveys (App. IV, Q.17), 1970-71.

Food¹

Food was the most important single category of household expenditure in all three regions. Household expenditure on food varied from \$7 in Ha'apai to \$600 in Tongatapu during the period under consideration. The average figure was \$82 in Ha'apai, \$106 in Vava'u and \$226 in Tongatapu. In proportional terms, the percentage of total expenditure on food differed very little from region to region. The amount of cash so spent depended largely on the household's cash income and on the amount of its food needs which the household itself produced.

The bulk of the food expenditure was incurred on purchases of imported foodstuffs such as tinned meat, frozen meat, and tinned fish. Large quantities of tea, sugar, flour and tinned milk were also consumed. Bread was available in all of the Tongatapu villages but only in a minority of the villages of Ha'apai and Vava'u. The majority of the households in Tongatapu regularly consumed purchased foodstuffs, while only a small percentage of the households in Ha'apai and Vava'u did likewise. Purchases of locally produced foodstuffs such as yam, kumala, talo, bananas, coconuts and vegetables involved mostly those households that did very little or no farming at all, the majority of which were located in the urban area of Tongatapu. Purchases of locally caught fish and locally produced meat were also made fairly regularly, but, again, mostly in the urban area of Nuku'alofa.

1 Franklin (1969, 2) has noted that at low levels of living the percentage of total income spent on food and other basic commodities "is extremely high, so that what one eats, and how often one eats, is very much an indication of one's wealth".

A more detailed indication of the range of foodstuffs bought and of the amounts spent thereon can be obtained from an examination of the figures contained in Table 5.6. These figures relate to the purchases of a typical urban and a typical rural household in each region over a period of 2 weeks. It can be clearly seen that the urban household in Tongatapu bought a larger amount as well as a greater variety of foods than did the urban household in either Ha'apai or Vava'u. It is interesting to note that the urban Tongatapu household spent as much as 3 times the amount spent by the corresponding household in each of the other 2 regions. The urban household in Tongatapu generally had 3 meals a day while those in Ha'apai and Vava'u normally had only 2. Table 5.6 also shows that the average rural household in Tongatapu consumed more purchased foods than its counterpart in Ha'apai and Vava'u.

Food purchases in the village retail stores were generally made on credit and normally paid for when cash was obtained. Where there was no local store, nor one readily accessible, as was the case in the more isolated villages of Ha'apai and Vava'u, purchases were made from other villages or the regional trading centre, the frequency of visit depending on distance and availability of transport. Clothing and items such as housing materials, and agricultural equipment were normally bought at the main regional town.

Table 5.6: Average Patterns of Food Purchases for
Six Households Over a Period of Two Weeks

Food Items	Tongatapu		Ha'apai		Vava'u	
	A ¹	B	A	B	A	B
Bread, flour, butter, jam, etc.	2.00 ²	0.80	0.90	-	1.10	0.30
Sugar, tea, coffee, salt, dripping, curry, etc.	1.03	0.52	0.48	0.20	0.63	0.41
Meat (fresh)	0.56	-	-	-	-	-
Meat (frozen)	0.74	0.74	-	-	0.56	-
Tinned meat	0.90	0.45	0.45	0.94	0.92	0.45
Fish (fresh)	1.50	0.50	-	-	-	-
Tinned fish	0.24	-	0.26	-	0.26	0.28
Other tinned foods	0.42	-	-	-	-	-
Ground foods and vegetables	2.40	-	-	-	0.40	-
TOTAL:	9.79	3.01	2.09	1.14	3.87	1.44

1 A - An average urban household; B - A typical rural household.

2 These values are in dollars.

Source: Field-surveys (household case-studies), 1970-71.

Clothing and other domestic commodities

Clothing was generally not a major item of expenditure in the households surveyed;¹ it comprised no more than 6.6 per cent of the total expenditure in all three regions. In absolute values, the amount expended by the average household was, as would be expected, highest in Tongatapu and lowest in Ha'apai.

Expenditure on such items as utensils, kerosene, benzene, soap and so on constituted 12.3 per cent of the total household expenditure in Tongatapu, 17.9 per cent in Ha'apai and 10.8 per cent in Vava'u. In all three regions kerosene, benzene and soap were the most frequently bought items other than foodstuffs. Those with electricity, the majority of whom were in the Nuku'alofa area, paid an average of \$3.3 in electricity bills per month.

Capital

The class of expenditure termed 'Capital' included a number of different items. Under housing and household durables are subsumed purchases of housing materials, furniture, lamps, radios, tools and so on. Expenditure on these were low in all three regions in both absolute and proportional terms. With a greater level of income the average household in Tongatapu spent more on these items

1 With the exception of young adults working as salary and wage-earners who not only were generally inclined to have more clothes but also had the money with which to buy them, most Tongans appeared satisfied with little in way of every day clothing. The majority had only two or three changes - one set of working clothes, and one or two of clean-wearing clothes.

than did its counterparts in Ha'apai and Vava'u. Examination of the survey results, supported by other evidence, showed that generally the urban households, especially those in Nuku'alofa, spent more on household materials and household durables than did their rural counterparts. The urban households appeared more sophisticated in this respect. As noted in Chapter 3.3, the Nuku'alofa inhabitants displayed a relatively marked degree of 'house-proudness'.

As Table 5.5 shows, investment on agriculture and other productive fields was rather low in all three regions. It was highest in Tongatapu with an average of \$19 and lowest in Ha'apai with \$4. As a proportion of total household expenditure, it was less than 5 per cent in all three regions.

It seems that within the framework of a low-income rural economy where levels of living are low, and where marginal returns to investment in productive activities are also low and often by no means assured, there is a relatively high marginal propensity to consume, and thus cash earnings as a general rule tend to be used for current consumption rather than investment.

Education

Of the expenses on services those on education were second only to those on food in all 3 regions. The knowledge that a good education is one of the few avenues available in Tonga leading to a good paid job¹ is forcing many parents to spend a high proportion of their cash income in paying their children's school fees and other related expenses. Table 5.5 shows that the expenditure on schooling

1 This was discussed in Chapter 3.2.

ranged from an average of \$27 in Ha'apai to \$34 in Vava'u to \$61 in Tongatapu. The differences in expenditure on schooling reflect not so much differences in the way education is valued, but rather differences in the average number of children attending school, particularly secondary schools, and the average costs, both of which were highest in Tongatapu.

In the course of the field survey, a question was asked: "Imagine that during this year your cash income is \$100 more than last year? How would you use the extra money?" About 60 per cent of the 100 respondents said that they would use the money to pay for their children's schooling; 31 per cent indicated that they would build better houses; 7 per cent replied that they would use it to develop their farms, and 2 per cent to buy more and better food. This underlines the great importance in which education is held, followed by a desire for a good house; conversely, the results indicate a comparatively weak desire to invest in productive activities.

'Luxury' goods and local fares

Spending connected with 'luxury' goods and entertainment is another category of expenditure items in the Tongan household budget. Cigarettes were the major item in this category. Other items included alcohol which was particularly important in the Nuku'alofa area, cinema tickets, dancing and so on. The Tongatapu household is shown, again, to have spent more on entertainment than its counterpart in Ha'apai and Vava'u, due not only to a greater level of cash income but also to a greater degree of availability of

entertainment goods and services.

As an item of expenditure, local fares were higher in Tongatapu with its better and more transport facilities. Moreover, the Tongatapu residents were more mobile than those in the other two regions. The difficulty of travelling to and from some of the settlements in Ha'apai and Vava'u acted as a deterrent to many people who would otherwise travel.

Traditional obligations

The significance of traditional obligations to relatives, friends and Church is clearly borne out in Table 5.5. This particular category of expenditure claimed 16.0 per cent of the total average household expenditure in Tongatapu, 22.9 per cent of that in Ha'apai and 22.0 per cent of that in Vava'u. In absolute terms, this cash outlay was highest in Tongatapu. Of the various obligations listed under this category, that to the Church was the most significant. The average amount spent on church activities or donations was rather high, with a considerable number of households spending as much as 40 to 50 per cent of their total cash income on church donations.¹ Obligations to friends and relatives, particularly in relation to funerals, weddings and other ceremonial occasions, were also fairly important. The occasions calling for fulfilling these obligations were rather irregular, but, when they did occur, they often involved considerable expenses. Obligations to the village, noble or government appear from the data obtained to be quite insignificant in comparison to those obligations

1 The importance of the Church in Tongan society is outlined in Appendix I.iii.

already described.

It was observed that in general the efforts Tongans made to obtain money to fulfil their various social obligations were often more vigorous and more sustained than those made in order to obtain money for their basic every day needs. Moreover, despite their low incomes, the Tongans responded more readily to appeals of a communal nature than to their more personal demands of basic daily needs. Thus, there was a ready, though perhaps uneven, response to Church appeals for funds.

5.3: SAVINGS, INCOME ADEQUACY LEVEL AND INTRA-REGIONAL VARIATIONS

Cash savings¹

It was difficult to estimate fairly accurately the extent of cash savings of the Tongan household. Cash savings of the surveyed households for the period under study ranged from \$5.60 in Ha'apai to \$613.00 in Tongatapu; the averages were \$38.00 in Tongatapu, \$4.00 in Ha'apai and \$3.00 in Vava'u. As might be expected, not all of the surveyed households had savings; in fact, the majority had no savings at all. Thus, only 32 per cent of the households in Tongatapu had savings, 16 per cent in Ha'apai and 18 per cent in Vava'u. In all three regions, households with savings were mainly those in which at least one member was in full-time paid employment. Spatially, these households were largely concentrated in the urban area of

1 This topic is also discussed in Chapter 6.1.

each region. There was, however, a comparatively greater areal spread of such households in Tongatapu than in the other two regions. Thus, only 61 per cent of the Tongatapu households with savings were located in the urban area of Nuku'alofa, while the comparable proportions for Ha'apai and Vava'u both exceeded 85 per cent. Naturally, households with savings were largely those in the above-average income bracket. In the majority of cases, savings were made for a particular purpose such as purchasing housing materials, paying school fees or Christmas shopping.

The only banking facility in Tonga was the Post Office Savings Bank, of which there was only one branch in each region. With such relatively poor savings facilities it is not difficult to see why few people had savings accounts, though the prevailing low cash income was perhaps the most important single contributory factor to low savings. Evidence gathered in the course of the survey suggested that, for the greater part of the year, most of the households had some debts at the village store(s).

An 'adequacy' level of income

In an attempt to determine the sufficiency or otherwise of the average levels of income, 75 informants, 25 from each of the case-study villages, were asked to estimate what they considered to be an adequate income level¹ for the average Tongan household. Most of the informants took some time to answer this question. Inescapably in answering the question they compared their current levels of income with what they

1 Which, as noted earlier, is virtually synonymous with expenditure level, given limited investment.

thought they should, and could, have. The answers ranged from \$150 to \$800 with an overall average of \$305. By comparing this average with the levels of income of the surveyed households (Fig. 5.1 and Table 5.7), it can be seen that over two-thirds of the Ha'apai and Vava'u households had incomes below the estimated 'adequacy level', while in Tongatapu, by contrast, over half were above that level. Although this method may be judged a crude way of evaluating the adequacy of household income, it, plus personal observations, provides a fair indication of the relative positions of the regional households with respect to an 'adequacy level' of income.

Intra-regional variations in income

Although the major concern of this Chapter, indeed of this thesis, is with inter-regional variations, a few observations on intra-regional differences will not be inappropriate. Table 5.7 contains some details of household income by subregion. In general, these results underline the observations made above on the basis of the regional analysis. In particular, the lower incomes in Ha'apai and Vava'u as indicated by the ranges and medians are very noticeable.

It can also be seen that in each region the subregion containing the regional centre had the highest average and median incomes. The Table also reveals that within each region there were households whose levels of income were well below the regional or even subregional average. Moreover, the differences in the subregional averages were, in proportional terms, higher in Ha'apai and Vava'u than in Tongatapu. Thus, whereas in Tongatapu, the highest subregional

Table 5.7: Some Details of Household Cash
Income by Sub-region
(\\$)

Sub-region	Average	Range	Median
<u>Tongatapu:</u>			
Far-Eastern	417	93-1921	320
Mid-Eastern	389	75-974	247
Central	411	113-1503	346
Western	385	68-863	225
Urban	592	89-4170	417
All Tongatapu	464	68-4170	328
<u>Ha'apai:</u>			
Main Islands	186	69-891	143
Smaller Islands	91	15-367	78
All Ha'apai	153	15-891	104
<u>Vava'u:</u>			
Eastern Vava'u	256	101-1729	217
Western Vava'u	153	82-630	128
Islands	106	47-252	79
All Vava'u	188	47-1729	133

Source: Field-surveys (App. IV, Q.16), 1970-71.

average was only $1\frac{1}{2}$ times the lowest average, the comparable ratios for Ha'apai and Vava'u both exceeded 2. Finally, while all the Tongatapu subregional averages exceeded the estimated 'adequacy level' of \$305, the corresponding figures for Ha'apai and Vava'u did not.

Conclusion

It has been shown in this Chapter that there were significant differences in regional patterns of household cash income and expenditure. The Tongatapu average level of income was more than twice that in Vava'u and three times that in Ha'apai. One of the major influences on the Tongatapu average was the very high proportion derived from paid employment. In terms of the number of households involved agriculture was the main source of income in all these regions. Overall, income-generating opportunities were much better in Tongatapu in both variety and earning capacity.

The average levels of household expenditure followed very closely those of income. The household consumption patterns were therefore at higher and more varied levels in Tongatapu than in the other 2 regions. Whereas more than half of the Tongatapu households had incomes which exceeded the 'adequacy level' of \$305, less than one-third of the households in Ha'apai and Vava'u had incomes surpassing that level. Finally, it was shown that within each region there were considerable variations in income.

PART THREE

A GENERAL EXPLANATION AND SYNTHESIS

CHAPTER 6: A GENERAL EXPLANATION

Most of the material presented in the preceding three Chapters has confirmed the existence of considerable regional inequalities in level of socio-economic development in Tonga. And, throughout these Chapters, references were made to some of the major contributory factors. These factors included differences in history, land resources, access to the market economy, transport facilities, and so on. In this Chapter an attempt is made to compare the findings of this study with other related findings, both theoretical and empirical, such as those outlined in Chapter 1. The first part of the Chapter examines the regional differences in development in recent years in order to ascertain whether there has been any tendency for development to be concentrated in a specific region in accordance with the general consensus of opinion on regional inequalities. In the second part of the Chapter, an attempt is made to consider the relevance of the principle of 'circular and cumulative causation' and of 'backwash' and 'spread effects' in explaining regional inequalities in Tonga.

6.1: TRENDS IN RECENT DEVELOPMENT IN TONGA

The following examination of regional differences in recent economic development relates mainly to changes occurring during the last two decades since little relevant information for previous years is available. Specifically, attention is focused on cash crop production, per capita incomes and

non-agricultural economic activities. Consideration is also taken of government policies since these, as pointed out elsewhere,¹ have always been a dominating influence on both past and present patterns of regional development. Brief references are likewise made to the questions of leadership and entrepreneurship since these have also played, and are playing, important roles in the spatial patterns of development.

Cash crop production

The advance in the prosperity of Tonga since the Second World War has rested most heavily upon the export of copra, and to a lesser extent, of bananas. The 1950-60 decade was the most prosperous period for the copra industry, the main stimulus being the high prices obtained for copra especially during the first half of the decade. As indicated in Figure 6.1, Tongatapu has always produced the bulk of the copra exported from Tonga. On a per capita basis, however, Vava'u and Ha'apai (in that order) had, prior to 1961, generally produced more copra than Tongatapu. Thus, in 1956, the volume of copra produced per capita was 0.48 ton in Vava'u, 0.47 ton in Ha'apai and 0.35 ton in Tongatapu. But production in Ha'apai and Vava'u reached record lows in 1962, following the destructive hurricane which struck those two groups in 1961, and the recovery of the industry since has been rather slow.² By contrast, copra production in Tongatapu during the past decade has remained at a relatively

1 Introduction and Appendix I.ii.

2 The low prices for copra in recent years have also contributed to this slow recovery.

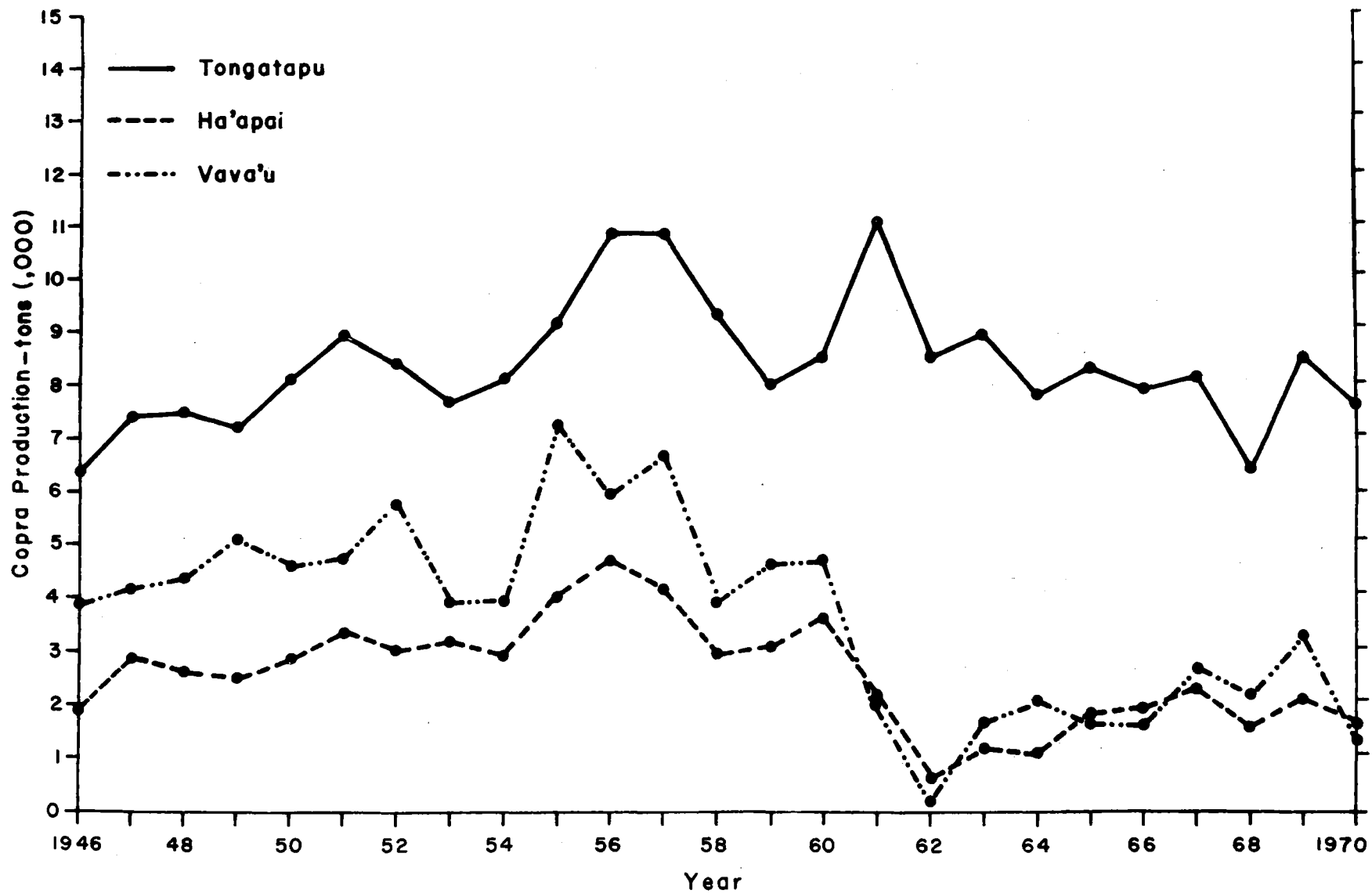


Figure 6.1: Copra Production by Main Regions, 1946-70

Sources: Same as for Table I.2

stable level.

In an attempt to increase coconut production, the Government allocated nearly \$0.5 million of the first five-year Development Plan's total expenditure of \$4.8 million to an elaborate Coconut Replanting Scheme (CRS). The scheme aimed at extending acreages under coconuts by 20,000 to 25,000 acres, to bring the total to between 75,000 and 80,000 acres. This scheme has so far been most successful in Tongatapu. Of the acreages developed each year about 45 per cent has been in Tongatapu, 30 per cent in Vava'u and 20 per cent in Ha'apai, the remainder being in 'Eua and Niuatoputapu. In terms of attention given to the developed land, Tongatapu again led the other two regions. Thus, in Tongatapu about 70 per cent of the developed land has been maintained in a satisfactory condition against about 45 per cent in Ha'apai and Vava'u (CRS, 1970, 6). Again, a greater proportion of the fertilizer supplied under the fertilizer subsidy scheme has been used on Tongatapu plantations. Of the 99 tons of fertilizer used under the scheme in 1969, 64 tons were issued to Tongatapu growers (CRS, 1969, 5). One of the implications of this situation is that the interregional gap in the level of copra production will at least be maintained, if not increased.

The regional differences in cash crop production over the past 2 decades have been even greater when banana production is considered. These differences are clearly illustrated in Figure 6.2. It can be seen that expansion in banana cultivation has taken place largely in Tongatapu, and roughly 80 per cent of all bananas exported each year have been supplied by the Tongatapu growers. Likewise

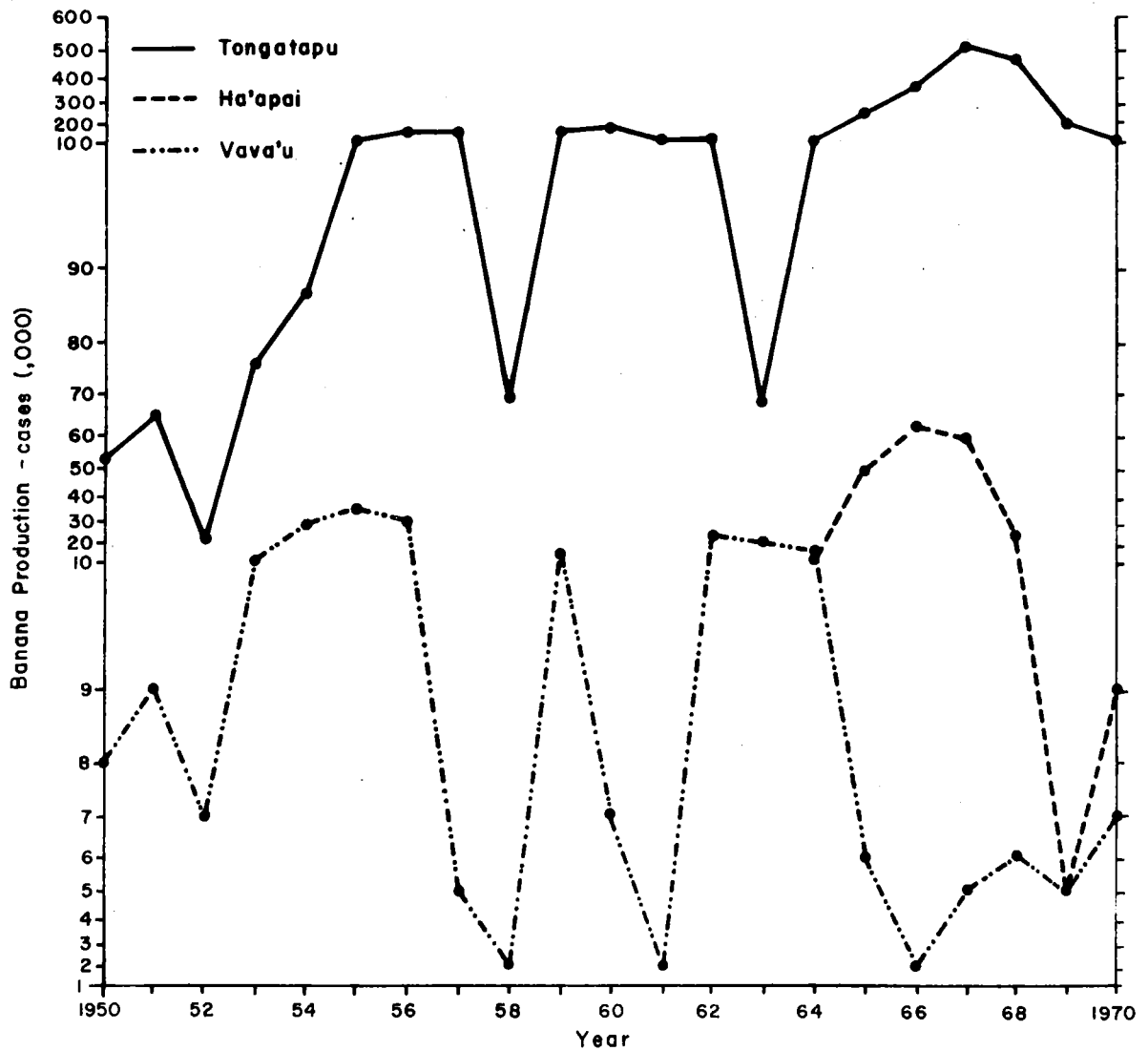


Figure 6.2: Banana Production by Main Regions, 1950-70
Sources: Same as for Table I.2

the increase during the past decade in the amount of other agricultural products exported or sold locally has been most spectacular in Tongatapu. Officials of the Department of Agriculture estimated,¹ for example, that the volume and variety of agricultural produce sold at the Nuku'alofa market in 1970 were three times more than the level and variety sold there in 1960. By contrast, the situations in Ha'apai and Vava'u have shown very little indication of progress.

Cash income and savings

Since the vast majority of the Tongan households derive most of their cash income from exports of copra and bananas, per capita incomes from these sources provide a good indication of the extent of regional inequalities in recent development. Relevant details for the years 1956 and 1966 are contained in Table 6.1. It is interesting to note that in 1956 Ha'apai and Vava'u had higher per capita incomes than Tongatapu. What is even more interesting, however, is the fact that by 1966 the Ha'apai and Vava'u averages had declined by larger amounts and were then less than the comparable figure for Tongatapu. This situation is particularly significant when it is remembered that the latter region experienced an average annual population growth rate of 5.3 per cent between 1956 and 1966 compared with a corresponding rate of less than 1 per cent for both the former regions. If cash incomes from other sources such as wages and salaries, sales of goods and services, remittances from friends and

1 Pers. comm., 1971.

Table 6.1: Cash Income and Savings
- 1956 and 1966

Income and Savings	Tongatapu		Ha'apai		Vava'u	
	<u>1956</u>	<u>1966</u>	<u>1956</u>	<u>1966</u>	<u>1956</u>	<u>1966</u>
Per capita income ¹	39.4	39.2	47.4	34.7	49.3	11.8
<u>Savings:</u>						
No accounts ²	146	165	114	98	136	127
Amounts deposited ³	7.1	8.1	2.4	1.5	2.7	3.1

1 Income, expressed in dollars, derived from exports of copra (including coconuts sold to the desiccated coconut factory in the case of Tongatapu) and bananas.

2 These refer to the savings accounts held by the Savings branch of the Treasury which acts as banker. As yet there are no private financial institutions in Tonga. The number of accounts stated are expressed in terms of 1,000 head of population.

3 Expressed in per capita terms.

Sources: Tupouniua (1958), Fiefia (1968), Files of the Copra and Produce Boards, and Report of the Minister of Finance for the years 1956 and 1966.

relatives overseas were added to the export derived incomes, the increase in per capita income in Tongatapu would have been much greater.

Table 6.1 also contains details relating to the number of savings accounts and the amounts deposited in those accounts during the years 1956 and 1966. It can readily be seen that in both respects Tongatapu had made better progress than both Ha'apai and Vava'u.

Industrial development

Industrial development has taken place on only a very limited scale in Tonga, but the pattern already shows a clear concentration in Tongatapu, especially in and around Nuku'alofa. Perhaps the most significant development of the post-war period has been the establishment in 1962 of a desiccated coconut factory, owned and operated by the Copra Board, at Haveluloto on the outskirts of Nuku'alofa. Attached to this as a coir factory.¹ These two factories constitute the only manufacturing establishments of any importance so far set up in Tonga. They employ at most times a work force of about 300 persons.

Also established at Haveluloto, in 1958, was the Tonga Construction Company, a subsidiary of the Tonga Copra Board. The construction industry in Tonga is dominated by this company which has carried out most private construction work of any importance and most of the government's building programmes. Also attached to the Tonga Construction Company are small furniture manufacturing and engineering industries.

1 This factory ceased production in 1969; see Chapter 2.2.

At the time of the survey, the Company employed about 250 workers. The only private construction interest of any significance is that of the Church of the Latter Day Saints which also has already had its construction works heavily concentrated in Tongatapu. It had a work force of approximately 200 persons in 1970. According to officials of these two construction interests and of the larger stores in Tonga, over three-quarters of all building materials imported into the country annually are used in Tongatapu.

The Australian firm of Fathom Fisheries Ltd., established 3 years ago, is also based in Nuku'alofa. In addition to exporting fish and crayfish (with little processing done in Tonga), it also undertakes some boat-building and is now in the process of establishing a canning factory. Other small-scale private industries that have been established within the past two decades include several soft-drink manufacturing plants, a biscuit factory, bakeries, and so on; most of these have been set up in Tongatapu, especially in Nuku'alofa.

Government policies

The existing regional differences in socio-economic development are due largely to government policies which have favoured the development of Tongatapu, especially of Nuku'alofa.¹ About 90 per cent of government annual

1 Bellam (1969, 11) has also arrived at a similar conclusion with respect to the Solomon Islands. He wrote: "The existing regional disparities largely are due to Colonial Administration policies which have favoured urban and expatriate-oriented development. Although about half of the budget revenue is financed through metropolitan aid, most of this money has been spent on education, health and urban development".

expenditure is spent on Tongatapu (with approximately 65 per cent of the population), largely on educational, health and government services, public utilities and communication facilities, and manufacturing industries such as those already mentioned. Since the Government is the only body in Tonga capable of any large-scale investment, this spatially disproportionate distribution of annual public expenditure has led to a concentration of services, facilities and opportunities in Tongatapu. Increased expenditure within Tongatapu during the past decade or two has increased the economic differential between that island and the outer islands, and has helped to increase the rate of migration to the former in recent years. In turn this migration has also contributed to increased government expenditure in Tongatapu. A process of circular and cumulative causation has, therefore, started, and is most likely to continue unless appropriate action is taken to control it.

Because it believed that there was a need to establish a 'modern' bureaucracy, an infrastructure and other services of a capital,¹ the Government has devoted by far the greater part of its total annual investment to Nuku'alofa. Moreover, this investment has helped to create the concomitants associated with economic centralisation: a very centralised bureaucracy, the establishment of the leading monetary sector, economies of scale, and a greatly increased division of labour. Since 1960 a building and construction boom

1 Personal communication with one of the senior government officials who wished to remain anonymous.

began, largely concentrated in Nuku'alofa. A whole series of impressive new administrative structures and educational establishments were erected. A large number of heavily subsidised rental houses for expatriates and professional indigenous employees of Government were built. The building of the manufacturing establishments at Haveluloto, the construction of the deep-water wharf (the only one of its kind in Tonga), and of the new hospital, each costing about \$1 million, all formed part of the building boom of the 1960-70 decade. By contrast, very little building and construction work has been undertaken in Ha'apai and Vava'u. Road construction programmes have also focussed largely on Tongatapu, so that now there is a good network of sealed roads connecting Nuku'alofa to all the villages of Tongatapu.

The overwhelming and increasing disparity between Nuku'alofa and the rest of Tonga, especially the outer islands, is in no small measure due to the fact that the former has been allocated a disproportionate share of the limited investment capital available.¹ The effect of this pattern of investment or spatial inequality is strengthened by what Ullman (1958, 159) has called the 'self-generating momentum' of concentration. Another important effect of this spatially disproportionate investment pattern is that comparatively few development projects have been undertaken in the outer islands. A proportion of the public funds spent in Nuku'alofa, especially on buildings and some of the social

1 This is similar to the observations made by Bellam (1969) with regards to the disparity between Horiara and the rest of the Solomon Islands; see Chapter 2.1.

services,¹ could have been put to better use by providing, for example, some of the necessary services and facilities for the farmers and fishermen of the outer islands. Viewed from this, and other standpoints,² the development of Nuku'alofa can be regarded as parasitic.³

Until the last few years, national development planning was completely lacking in Tonga. The first official commitment by the Tongan Government was expressed in a very general five-year Development Plan covering the period 1965-70; this was followed by another Plan covering the quinquennium 1970-75. A brief examination of these Plans will provide an indication of the Government's views regarding regional development.

One of the most notable features⁴ of these Plans, as far as the present study is concerned, is the lack of

1 Of the total expenditure of the first Development Plan, 5.7 per cent was spent on administrative buildings and government housing, 4.7 per cent on education, 23.1 per cent on health (a greater part of which was devoted to the new hospital in Nuku'alofa), and 6.7 per cent on law and order. About three-quarters of all this expenditure was on projects in Nuku'alofa. While some of these projects could not be delayed, a number of them especially administrative buildings and those on law and order could, and should, have been postponed and funds allocated thereto devoted to programmes aimed at greater utilisation of the resources of the outer islands. Of the proposed total expenditure of the current Plan, about 30 per cent has been allocated to buildings of various kinds.

2 See Chapter 7.

3 It was pointed out in Chapter 1.2 that urban areas of the underdeveloped world are not necessarily all centres of innovation, social and economic development; some of them are parasitic instead.

4 Another notable feature of the Plans is the lack of attention given as to how manpower and the sea, the only plentiful local resources in Tonga, may be utilised more fully.

regional thinking incorporated into them. Thus, as stated in the Introduction to this thesis, there was only one sentence in the first Plan that referred to the need to counteract over-centralisation in Tongatapu. Reference was also made in the same Introduction to the disproportionately small share, estimated to be less than 10 per cent, of the Development funds¹ that was devoted to the outer islands which contain nearly 40 per cent of the total population.

Unlike the first Plan, the second one explicitly stated the need to "counteract the excessive and growing primacy of Tongatapu and Nuku'alofa and to utilise more effectively the resources of the outer islands" (DPII, 35), although the regional allocations of the funds were not very much different from those of the first Plan. The purchase of the inter-island ferry, the 'Olovaha',² and the proposed construction of airfields at Vava'u,³ Ha'apai and 'Eua represented the main provisions intended to improve transport between the various island groups. But improvements in transport alone would not necessarily counteract the growing primacy of Tongatapu and Nuku'alofa. On the contrary, transport development may even enhance that primacy. As Misra (1972, 152) has observed in India and Gauthier (1968, 124-25) in Brazil, improvements in transport often tend to polarize rather than diffuse economic development.

1 Which totalled \$4.85 million.

2 Which began operation in January 1971, and plies between the three main regional centres.

3 The airfield at Vava'u was completed in September 1972, but work on the others has yet to be commenced.

Although the 'Olovaha has been of immense value in linking up the main island groups, there has been very little attempt made to provide feeder services to link up the various islands of Ha'apai and Vava'u so as to take full advantage of its services. Further, there were no specific proposals for more and better marketing opportunities to promote increased production and hence increased incomes in the outer islands. One of the major objectives of the purchase of the 'Olovaha was to enable growers in the outer islands to ship their produce to the Nuku'alofa market (Bradanic, 1969, 9). This market has been, however, almost always more than adequately supplied by the Tongatapu growers alone. Further, there was no provision made in the Plan to exploit the considerable marine resources of the Ha'apai islands.

Spatial distribution of leadership

The tendency to concentrate government investment in Tongatapu has been reinforced by the fact that the outer islands have always had very little representation in Cabinet, Parliament and in the higher echelons of the civil service. In 1970, for example, all of the Cabinet Ministers and the two Governors of Ha'apai and Vava'u were permanent residents of Tongatapu, as were all the heads of government departments. Further, in Parliament all of the representatives of the nobles were permanent residents of Tongatapu, together with 2 of the 4 Parliamentarians representing Ha'apai and Vava'u. Quite a few of these traditional and elected leaders were formerly permanent residents of the outer islands. But during the past decade

or two, these leaders have also joined in the general movement of the young, the educated and the wealthy to Tongatapu. At the time of the survey, only 2 of the nobles were residing in the outer islands.

Although it is not possible to accurately appraise the importance of this factor, it is here believed that it has played, and is playing, an important part in the regional distribution of public expenditure and hence in regional development. Some of the Ha'apai and Vava'u informants seemed to have this in mind when they stated that perhaps a more equitable system of regional representation in Parliament would bring Ha'apai and Vava'u and the other groups more into the reckoning as far as public expenditure programmes were concerned. Moreover, in a society where traditional leaders are the Government and the initiators, and where the commoners are the 'passive doers', the concentration in and the movement to Tongatapu of the former, must have a bad psychological effect on the inhabitants of the outer islands.

Spatial incidence of entrepreneurship

Among the various factors that promote economic development and thus improve levels of living, entrepreneurship plays a vital role. Although the roles of natural resources, capital investment or institutions of various kinds may be regarded as of more crucial importance, the significance of entrepreneurship cannot be overlooked. The development of the advanced Western economies with their concomitant high levels of living was closely connected with the appearance of the innovating individual. Likewise, instances of

socio-economic progress in some of the Pacific Islands can be traced to the emergence of the entrepreneur,¹ the 'deviant' in social and economic behaviour.

Belshaw (1960, 97) has described types of entrepreneurs whose social and economic roles have considerable relevance to Tonga in the following way:

he may be a cultivator producing new crops and using more land, labour and equipment. He may be a proprietor operating a taxi service or constructing cane furniture. He may be a go-between, marketing produce for persons who feel unable to cope with commercial techniques. He may be a village official or cooperative leader guiding a community enterprise, or a state politician leading a ministry of public works.

The types of entrepreneurs most common in Tonga and which were investigated in this study are of the first two types described by Belshaw. In most cases the entrepreneur combines the role of the cultivator and the proprietor. In the main household survey, the extent of entrepreneurship, expressed simply in terms of the number of entrepreneurs, was estimated to be greatest in Tongatapu. Altogether there were 18 entrepreneurs in Tongatapu, and 3 in each of Ha'apai and Vava'u. In proportional terms, these represent 12 per cent of the surveyed households in Tongatapu, and 6 and 4 per cent of the households in Ha'apai and Vava'u respectively.

A more detailed attempt was made in the 3 village case-studies to gauge the extent of entrepreneurship in each village. There were 7 entrepreneurs in Niutoua, 1 in Holopeka and 2 in Ta'anea. Expressed as percentages of the total number of households, these figures mean that

1 See, for example, Belshaw (1964), Johnston (1967) and Watters (1969).

6 per cent of the households in Niutoua, 4 and 2 per cent of the households in Holopeka and Ta'anea respectively could be classed as entrepreneurial in the sense that they each contained an entrepreneur. Table 6.2 contains details of the major sources of income of the entrepreneurs, or alternatively, the types of income-generating activities in which they were engaged. Overall the Tongatapu entrepreneurs engaged in more income generating activities and had higher incomes than those in Ha'apai and Vava'u.

Of the various factors mentioned by the 10 entrepreneurs as having contributed significantly to their relative success, 4 were given special emphasis by the men: ability to work hard, organisational skill to ensure that the venture started continues to run profitably, ability to act fakapisinisi (businesslike) which is the equivalent of being a 'deviant' in social and economic behaviour, and availability of opportunities. From personal observations and inquiries, the first 2 factors displayed no significant regional variations. But with respect to the other 2 factors, their incidence appeared to be more widespread in Tongatapu than in the outer islands. Thus, purchase on credit and borrowing were found to be proportionately less common and less popular in Niutoua than in Holopeka and Ta'anea. As one migrant entrepreneur in Tongatapu observed, one of the first things that impressed him in Tongatapu was "the comparatively greater difficulty with which villagers there could, in general, make purchases on credit". In his experience in Ha'apai as a shopowner, it was difficult to refuse a villager when he asked for goods on credit.

As might be expected, opportunities for entrepreneurs

Table 6.2: Income and Income Sources of
Village Entrepreneurs

Entrepreneur	Copra Export	Bananas Export	Other Produce Exported	Produce Sold Locally	Own Store	Operating business truck, copra drying services etc.	Estimated Net Cash Income (\$) ¹
<u>Niutoua:</u>							
A ²	✓ ³	✓	✓	✓	✓	✓	1,000
B	✓	✓	✓	x	✓	✓	770
C	✓	✓	x	✓	x	x	710
D	✓	✓	✓	✓	x	x	500
E	x	✓	✓	✓	✓	✓	830
F	✓	✓	x	✓	x	x	490
G	x	✓	✓	✓	x	x	520
<u>Holopeka:</u>							
H	✓	✓	✓	x	✓	x	470
<u>Ta'anea:</u>							
I	✓	✓	✓	x	✓	x	710
J	x	✓	✓	x	✓	x	430

1 For the 12-month period studied.

2 A - J - Entrepreneurs.

3 ✓ - Indicates that the entrepreneur derived some income
from the source listed in that column;
x - indicates the opposite.

Source: Field-surveys (village case-studies), 1970-71.

were better and more varied in Tongatapu than in the other regions. This was a situation that was stressed most by the Ha'apai and Vava'i entrepreneurs. It is interesting to note that 2 of the 7 Tongatapu entrepreneurs were originally from the outer islands. They had left their home islands because "the faingamalie to make money were not as good as those that appeared to exist in Tongatapu". Enquiries made also revealed that 1 entrepreneur from Holopeka and at least 3 potential entrepreneurs from Ta'anea had left for Tongatapu during the last decade.

6.2: COMPARISON WITH OTHER RELATED FINDINGS

Myrdal's argument, as outlined in Chapter 1, is, briefly, that in most countries, but especially in the under-developed ones, regional inequalities tend to increase rather than decrease due largely to the process of circular and cumulative causation. Moreover, if the growth process is left to the working out of the market forces, the adverse backwash effects of the advanced region(s) will tend to exceed its beneficial spread effects on the backward region(s), leading to increased regional disparities.

Tendencies towards regional inequalities, and the process of circular and cumulative causation

The principle of the widening gulf between the comparatively more developed and the poor regions which has been proposed and observed on a world scale by such writers as Myrdal and Williamson, among others, applies with considerable force in Tonga. The first part of the present

Chapter has shown, for example, how per capita cash income in Tongatapu has increased since 1956 while in Ha'apai and Vava'u it has been decreasing; expansion in cash crop production was also shown to have been most marked in Tongatapu. Evidence has also been presented showing how development has, through the mechanism of circular and cumulative causation, tended to concentrate in Tongatapu, especially in Nuku'alofa, where most has already taken place. In contrast, regression rather than development has characterised the other two groups. As Walsh (1967b, 21-22) and Couper (1967, xxix) have noted, the outer islands are now economically depressed and exhibit relics of a more prosperous past. These findings have a close parallel in O'Connor's (1963) findings for Uganda where recent development has concentrated in Buganda, the most advanced region in that country.

Examination of some of the factors influencing internal migration has shown obvious evidence of the operation of a process of circular causation, with migration between the outer islands and Tongatapu showing distinctly cumulative characteristics. The main destination of much of the migration has been the whole of Tongatapu, but within the last decade, this influx has concentrated largely on the urban area of Nuku'alofa. Moreover, the magnitude of this movement has accelerated in recent years. There has also been an increasing tendency for the young and educated and the more wealthy and enterprising to move to Tongatapu. The growth of Nuku'alofa can be explained in terms of circular and cumulative causation working in an upward direction.

Two of the most fundamental contributory factors to the emergence and persistence of regional inequalities in Tonga have been, and are, the country's fragmentation into numerous small islands scattered over great distances, and its isolation from its export markets. Transport, especially sea transport, is, therefore, of primary importance to the development of the country. The greater proportion of imports to and exports from Tonga are transhipped through the port of Nuku'alofa. Thus the development of the various regions requires adequate shipping services to knit the archipelago into an economic whole. But sea transport is costly and difficult while the resources of the country are meagre. Consequently there is regional and local differentiation in transport. It is, therefore, at the port towns, especially Nuku'alofa, and their immediate hinterlands where development has tended to concentrate. In general, O'Loughlin's (1956, 3) comment that spatial patterns of development of the Fiji islands are likely, for communication reasons, to continue to be uneven, "unless centralised action is taken to encourage development in the more backward districts" may equally be applied to Tonga.

It was intimated that transport difficulties were most acute in the smaller and more isolated islands of Ha'apai and Vava'u. Under laissez-faire conditions shipping services to those areas were infrequent and irregular. The major reason advanced by shipping interests for the poor services to those islands was the lack of cargoes. This problem was compounded in many cases by difficult landing conditions and by the length of time and high cost necessary

to cover the great distances involved. To some extent this is a case of circular cumulative causation. Without a regular and frequent service, people were reluctant to produce for outside markets, thus reducing the potential cargoes and the number of calls made by shipping. This in turn acted as a further disincentive to produce for outside markets. Again, because of infrequent shipping services and high freight rates, many of the stores in the outer islands often ran short of supplies; in any case most of them stocked only a limited range of commodities. This acted to dampen incentive to produce for the market and thus a limited amount of cash would be earned. This in turn would cause shipping services to become even more infrequent and irregular. There is, therefore, in these circumstances a process of circular and cumulative causation forcing the remote and already relatively poor areas to become more and more remote and poorer.

On the other hand, a greater frequency and regularity of services gives incentive to produce for outside markets.¹ This relationship between shipping services and increased cash production is best illustrated by referring to the performance of the banana industry in the Ha'apai group. Because of transport difficulties,² due largely to lack of suitable vessels, the Ha'apai growers were not able to export bananas prior to 1964. But the provision of more adequate services in 1964 saw Ha'apai, with most islands participating, exporting a total of 11,589 cases of bananas in that year,

1 Provided, of course, that the external markets exist for the produce which the growers can and/or do produce.

2 Although this was the main reason, the limited export quota for the whole of Tonga in those years, was also a factor.

with the volume steadily increasing to reach a record of 62,391 cases in 1966. It is interesting to note that Ha'apai exported more bananas than Vava'u in 1966 (Fig. 6.2). In terms of Fisk's economic model (1962, 1964) the example cited could be interpreted as one of greatly improved linkage to the market leading to an increase in the incentive factor and hence an increase in production.

Backwash effects

Statistics concerning capital movements between the three regions are limited, but the indicators available suggest a tendency for capital to move from the outer islands to Tongatapu. For example, it has been estimated¹ that over half of the government revenue collected from duties on export and imports of the outer islands is retained in and/or remitted to Tongatapu where it is eventually expended. Further, since secondary schools are concentrated in Tongatapu, a considerable amount of money must be remitted annually to Tongatapu from the outer islands in payment of school fees and other related expenses. Finally, it has been estimated² that the missions in the outer islands each year receive over \$50,000 from donations, and that roughly two-thirds of this amount is remitted to the various headquarters in Tongatapu.

To date the movement of labour from the outer islands to Tongatapu appears from available evidence to have been considerable. Information presented in Chapter 3.1 on the

1 By the author from information obtained from various government departments.

2 By the author from data supplied by some of the missions.

age-sex structures of the surveyed households showed evidence of this trend. Further, a comparison of the population from these islands residing in Tongatapu in 1966 (Fig. 6.3) shows that both Ha'apai and Vava'u were comparatively over-represented in the young and older age groups; and that both had proportionately fewer males than females than the average for the whole of Tonga or the average for Tongatapu.¹ Conversely, the migrant populations for these two groups living in Tongatapu in 1966 exhibited a preponderance of males over females, there being 108 and 116 males for every 100 females for the Ha'apai and Vava'u components respectively. Figure 6.3 also reveals that the greater proportions of these migrant populations were in the secondary school and working age groups. Between 1956 and 1966 the proportions of the Vava'u and Ha'apai migrant populations in Tongatapu that were of secondary school age had decreased from 33 to 27 per cent for Vava'u and 28 to 27 per cent for Ha'apai. During the same decade, however, the number of Vava'u and Ha'apai migrants in Tongatapu had increased by 104 and 64 per cent respectively. The conclusion, therefore, is that the number of people of working age groups migrating from Ha'apai and Vava'u to Tonga has been increasing.

Exactly what proportion of the migrant labour force in Tongatapu that would be regarded as relatively highly educated, enterprising and wealthy is difficult to say. Available evidence suggests, however, that the proportion is considerable. It has been estimated, for example, that

1 The number of males per 100 females in 1966 were: 106.0 for the whole of Tonga, 107.7 for Tongatapu, 96.6 for Ha'apai and 101.7 for Vava'u.

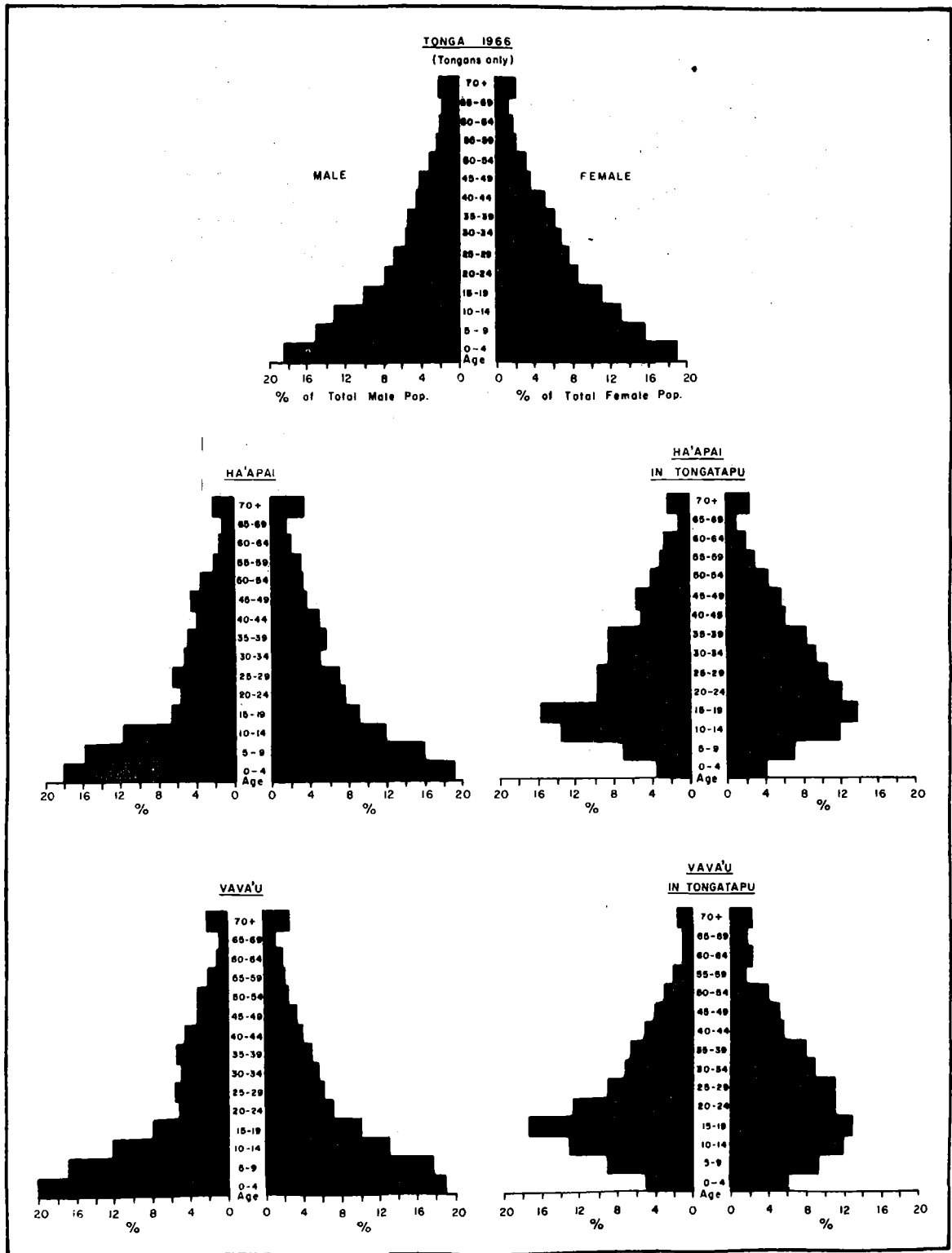


Figure 6.3: Age-sex Structures of Populations of Tonga, Ha'apai and Vava'u, and of Ha'apai- and Vava'u-born Residing in Tongatapu in 1966

Sources: Based on Tupouniua (1958), Fiefia (1968)

about half of those who had gone to Tongatapu for schooling did not return to their home island after they had completed their education; and, of those who had returned, few had remained for any length of time (Walsh, 1964, 164-65).

Walsh also found that in the Ha'apai group, those who had returned to reside after completing their education in Tongatapu "were those who had been unsuccessful at school or in their subsequent search for employment. One District Officer could think of no child who had been successful at school returning to his island permanently in recent years". Walsh (1967b, 41) has also noted, in referring to the economically depressed islands of the Vava'u group, that socially and commercially important families have left the islands.

Discussions which the present author held with some of the local informants in Ha'apai and Vava'u lent support to Walsh's findings. These sources estimated that as much as one-third of the more progressive and wealthy households of those two regions, especially in the urban centres, have left for Tongatapu during the past decade or two. An indication of this trend, as far as entrepreneurship is concerned, has already been given above. Another fair measure of this outmovement of wealth, talent and enterprise is given by the proportion of European and part-European families - traditionally the more wealthy and enterprising component of the population¹ - that have left Ha'apai and Vava'u, during the past 2 decades. About two-thirds of these families have left

1 Most of the larger stores in all three main centres are owned and operated by Europeans and part-Europeans, and a high proportion of this group are also among the more successful commercial farmers.

these islands, some going to Tongatapu and others to New Zealand.¹

Spread effects

The spread effects emanating from the growing region of Tongatapu appear to have been very limited indeed. The historical pattern of growth has not been such as to show any special inherent strength in spread effects. On the contrary, there has been very little industrial development on Tongatapu to require the establishment of subsidiary manufacturing industries in the outer islands. Equally as weak has been the response of increased production of raw materials and foodstuffs to supply the market of the growing region. This can be explained in part by the currently low level of development of the Tongan economy. As Myrdal (1957, 34) has stated,

part of the curse of a low average level of development in an under-developed country is the fact that the spread effects there are weak. This means that as a rule the free play of the market forces in a poor country will work more powerfully to create regional inequalities and to widen those which already exist. That a low level of economic development is accompanied as a rule by great economic inequalities represents itself a major impediment to progress. It tends to hold the under-developed countries down. This is one of the interlocking relations by which in the cumulative process "poverty becomes its own cause".

It can also be explained in part by the basic similarity in the resource endowments of the three regions, in part by their economies being predominantly agricultural, and in part by the archipelagic nature of the Group and the consequent difficulties and costs of transport. As Logan (1970, 114) has pointed out, when two regions with identical natural resource endowments do not have equal levels of

1 Especially those from Vava'u.

development, the explanation may lie in their relative locations. He added, however, that "locational advantage is not a simple matter of geographical distance, and it is the transport system that becomes the dominant framework around which economic activities are spatially arranged".

Conclusion

The material presented in this Chapter has shown that Myrdal's theory of circular and cumulative causation (and other related findings) provides a sound explanation of the question of regional inequalities in Tonga. Development in recent years, for example, has tended to concentrate in Tongatapu where most progress has taken place. A number of factors such as lack of regional planning, uneven spatial distribution of leadership and entrepreneurship, and physical fragmentation and areal scatter of the islands were noted as significant contributory factors to the existing spatial patterns of development. Also, under laissez-faire conditions, the process of circular and cumulative causation has operated to strengthen this tendency towards regional inequalities.

Another feature to have emerged from this Chapter is that urbanisation, in this case the growth of Nuku'alofa, has contributed, and is contributing, to the existing uneven spatial patterns of development. Moreover, although it has made some contribution to the economic growth and development of Tonga,¹ it has also been parasitic in some

1 This agrees in part with Hozelitz's (1960) and Friedmann's (1968) views that urbanisation is an important lever for progress.

respects.¹

Backwash effects were also shown to have been operating fairly effectively, while spread effects have been very weak. This is in agreement with Myrdal's view that in underdeveloped countries backwash effects tend to be strong while spread effects are likely to be weak. The situation in Tonga was also shown to agree with related findings in other underdeveloped countries. It is not difficult, therefore, to understand the particular nature and extent of existing regional inequalities in Tonga which this study has identified.

1 This lends support to the opposite view on urbanisation, held by such writers as Mabogunje (1968) and Frank (1966), which regards cities in the underdeveloped world as outposts of Western capitalism, parasitic and with little capacity to generate economic development.

CHAPTER 7: PROBLEMS AND IMPLICATIONS OF REGIONAL
INEQUALITIES, SOME RECOMMENDATIONS

The degree of interregional inequalities in levels of socio-economic development in Tonga has been shown, in Chapters 3 to 5, to be considerable. Evidence presented has also revealed that Tonga, like most other underdeveloped countries, has experienced increasing regional disparities through time (Chapter 6). In the light of these findings the present Chapter considers three closely related questions which have been central to the overall objectives of this study: firstly, to what extent can there be said to be contemporary socio-economic problems due largely, if not wholly, to regional inequalities; secondly, what kinds of problems appear most likely to occur in the future given a continuation of the current situation; and, finally, what steps should be taken to overcome such problems as do exist or may emerge. A few general observations and recommendations are also made.

7.1: PROBLEMS

Some of the problems associated with regional differences in socio-economic development have been noted in the preceding Chapters. In this section an attempt is made to elaborate on and underline some of these problems. Special emphasis is given to the problems associated with migration since the latter constitutes one of the most significant consequences of regional inequalities.

Differential access to the market economy

Perhaps the most obvious socio-economic problem associated with regional inequalities is the differential access to the market economy. People in Ha'apai and Vava'u had less opportunities of obtaining many of the goods and services they wanted because avenues which would facilitate their acquisition were inadequate. It was noted in the preceding Chapters, for example, that avenues for earning cash in Ha'apai and Vava'u were comparatively fewer than in Tongatapu. It was repeatedly stated to the author by inhabitants of Ha'apai and Vava'u that they could easily raise their levels of living if only they were provided with more and better opportunities to earn money. Developmental efforts and their concomitant opportunities were, they argued, concentrated in Tongatapu, and the Government was seen as not being overtly interested in the welfare of the outer islands.

These differential opportunities have led to the development of dissatisfaction and frustration in the depressed or 'under-privileged' regions, which, in turn, have acted not only as a powerful stimulant to migration to the 'more favoured' region of Tongatapu, but also as a basis for social, economic and political instability. Many of the informants in Ha'apai and Vava'u were becoming dissatisfied with the existing form of government which appeared to them to give attention to the outer islands only when it would give those in authority some benefit. Some asked "Why should we continue to pay

taxes¹ when we do not receive our due share of the public expenditure?"

Answers to the questions "Are you satisfied with the life in this island group?" and "Do you think you can raise your level of living?" revealed how dissatisfied the informants in Ha'apai and Vava'u were with the current situation. Table 7.1 shows that whereas the great majority of people in Tongatapu were quite satisfied with the life in that group, the vast majority of those in Ha'apai and Vava'u were not. To the latter, life on Tongatapu was much better, even though many of them had never lived there for any length of time. On the question of ability to raise existing levels of living, the more pessimistic and less hopeful attitudes of Ha'apai and Vava'u inhabitants emerge clearly. The most common reason given for their "no" answers to the two questions was "the lack of opportunities to earn cash", a situation which, they added in a rather fatalistic way, "only the Government could and should rectify". These attitudes indicate several important points: they underline, for example, the degree of awareness among the people of interregional differential access to the market economy; they also indicate the dissatisfaction of the people of Ha'apai and Vava'u with the lack of attention given them by the Government and their belief that it is the

1 This referred primarily to the poll tax, an annual tax imposed on every Tongan male over the age of 16 years. Although the amount involved is small (\$3.20 per annum per adult male) and the total therefore paid out by the adult males of Ha'apai and Vava'u may not cover the cost of annual government expenditure in those regions, the sentiment expressed illustrates the feelings of those inhabitants. A number of growers also referred to the export duty on copra, which is normally at the rate of 10 per cent ad valorem on the f.o.b. price.

Table 7.1: Distribution of Households According
to Degree of Satisfaction with and Ability to
Raise Level of Living¹
(Percentage)

	Tongatapu	Ha'apai	Vava'u
	<u>"Yes"</u> <u>Answer</u>	<u>"Yes"</u> <u>Answer</u>	<u>"Yes"</u> <u>Answer</u>
Whether satisfied	92.7	32.7	26.9
Whether able to raise level of living	65.6	24.4	37.3

1 As perceived by the household heads interviewed.

Source: Field-surveys (App. IV, Q.21), 1970-71.

Government's responsibility to help them; finally, the view that the Government should provide for them conversely underscores the lack of close liaison between the Government and the people, and the respective roles of the hou'eiki and the tu'a in traditional society.

Dependence on Tongatapu

As has already been indicated, many of the important social, political and economic decisions that affect the inhabitants of Ha'apai and Vava'u are made in Tongatapu. Thus, many of the disputes regarding landholdings can only be finalised in Tongatapu by the Minister of Lands, and efforts involved in going to Tongatapu to resolve such disputes can be expensive as well as time-consuming and frustrating. An official of the Lands and Survey Department in Vava'u estimated that as many as 500 cases of land (farm land) disputes (largely in relation to tenure) in that group had yet to be settled.¹ The effect of this situation on coconut and other cash crop production cannot be over-emphasised. Also, when a person is seeking credit at one of the local stores or is seeking a permit to export some produce, he may be told by the local officials that certain conditions must be fulfilled according to the directives from the head office in Tongatapu; the person concerned may even be told 'to go to Tongatapu to see the boss himself'. One is also made to feel a sense of dependence when an order for required goods or equipment is "mucked up" in Tongatapu so that the wrong or damaged items are sent. The sending of

1 This problem has already been referred to in Chapter 4.1.

wrong parts for a vehicle or boat often prevents necessary work from being done and gives rise to feelings of frustration; and when the next boat may not call for several weeks such incidents can cause considerable dissatisfaction and inconvenience. Moreover, when the Kingdom is short of necessities such as sugar, kerosene, and soap, it is nearly always the inhabitants of the outer islands that are first and most seriously affected.

Problems due to migration

It has been stressed that internal migration, an important feature of the geography of Tonga, is a response to interregional socio-economic disparities. The problems resulting from this migration will now be discussed.

Age-sex imbalances and loss of skill:

One of the most significant features of migration is that it is generally selective and can cause serious age-sex imbalances in the populations of regions concerned. Evidence already presented has, for example, shown that migration to Tongatapu has produced age-sex imbalances in all the regions under consideration. Out-migration from Ha'apai and Vava'u has resulted in a comparatively higher ratio of dependent to working persons. The migration process has, therefore, drained the outer islands of some of their more productive, progressive and energetic inhabitants - the young, the educated, the enterprising and the wealthy. Such losses, from regions where skill and entrepreneurial ability are urgently required but in critically short supply, are most likely to result in under-utilisation of resources and decreased production. These regions then become less productive

and less self-sufficient, with the end result that levels of living and quality of life deteriorate.

Although this latter problem was still very much localised in 1970, it has already given cause for concern. The District Officer of the Lulunga District¹ in the Ha'apai group, for example, said that there have been periods of food crop shortages in his district during the past decade. Volume of fish production was also alleged to have shown a marked decline in recent years. Although he noted a number of causal factors, the District Officer singled out loss of manpower, through out-migration, as the major cause for decreases in food production in recent years. For a country with limited resources, the effect of migration on resource utilisation must be duly recognised and acted upon if Tonga's level of living is to be improved. The country cannot afford to have its resources under-utilised. Moreover, the loss of youth and talent from the outer islands may present difficulties in any future attempt to develop those depressed areas. As Breeze (1966, 42) has noted,

a differential attraction of high talent from villages and agricultural sections to urban areas can create a considerable impact upon the affected rural areas. This attraction may even have rather significant national administrative implications as, for example, does the draining of persons from rural and village areas who might otherwise become representatives of decentralised government programs. Thus there may be a dyseconomy or dysfunction involved in the tendency of high talent-persons to leave villages where it is so necessary to have as many as possible return to these villages for administration of national programs.

1 The Lulunga District comprises the islands of Ha'afeva, 'O'ua, Matuka, Kotu, and Tungua (see Figure 0.4).

Migration, however, is not without some advantages. It helps to keep down the number and size of households in resource-scarce areas and so helps alleviate a future problem of people merely inheriting poverty. Some of the most densely populated islands of Ha'apai, such as Matuku, and Kotu,¹ for example, have benefited from out-migration. In such cases out-migration should be encouraged. Unfortunately, out-migration has not always resulted in better distributions of resources. The writer was told of many tax allotments belonging to people who had left the localities concerned that were being over-exploited for cash crops such as coconuts (that is, coconut plantations were being developed at the expense of good gardens) by absentee owners or their representatives; there were also holdings that were not utilised at all. This state of affairs caused considerable dissatisfaction among those villagers who were without land but who, nevertheless, carried out their village obligations.² For out-migration to have a positive effect on the man/land ratio, in the sense that those with inadequate amounts of land would have more from the abandoned holdings, the land tenure system must be changed to control absentee ownership.³ This could be done by giving secure lease of abandoned holdings to those remaining in the area or by effecting loss of land unless the owners return within, say, 5 years.⁴

1 For the densities of the various inhabited islands, see Table 0.1.

2 This and other similar problems have been noted by Walsh and Trlin (1973) for Niue.

3 Maude (1965) and Hardaker (1970) have made a number of sound suggestions as to how the land tenure system might be changed so as to allow more adequate distribution and utilisation of the land.

4 Or a similar arrangement based on some Pacific Island patterns of occupancy/use criterion for 'ownership'.

Problems due to rapid growth of Nuku'alofa:

As far as the destination areas are concerned, it should be noted that migration to areas outside Nuku'alofa has not, as yet, led to serious problems in those areas. But migration to Nuku'alofa - the target of most migrants in recent years - has been and is causing some concern. In the words of the 1966 Census Officer,

although Nuku'alofa is only a small town, already it has some of the problems usually associated with urbanisation, and these problems will become more serious as the high rate of increase continues. The immediate problems are purely physical such as housing and sewerage. This is not to ignore the multifarious social problems that usually go hand in hand with urbanisation (Fiefia, 1968, 11-12).

Observations made in the course of the survey left no doubt as to the existence and indeed seriousness of the problems of Nuku'alofa - such as those mentioned by the Census Officer. As pointed out in Chapter 3.3, many of the houses in Nuku'alofa, particularly those of the migrant households, appeared to have been inadequately built and overcrowded; indeed many aspects of housing in Nuku'alofa were observed to be worse than conditions in some of the villages. Lack of good water supplies and a sewerage system could result in health problems in the near future. Admittedly, these problems have existed for some time in Nuku'alofa in varying degrees, but the steady influx of migrants, most of whom are poor, has helped to aggravate them. Yet no action has been taken by the Government to recognise Nuku'alofa as a town, in spite of a report recently compiled on this subject.¹ The establishment of a system of local government, as suggested below, will help solve some of these problems.

1 Kennedy, Dart and Pritchard (1969).

In addition, since most of the migrants do not find jobs upon their arrival, they tend to live off relatives and friends, especially during the early stages of their 'resettlement'. Not infrequently this kind of dependence has caused considerable hardship to the relatives and friends concerned. It was particularly interesting to hear a number of people in the Nuku'alofa area expressing doubts about the 'wisdom' of the traditional custom of providing for and helping relatives and friends in the urban context. The effect of this kind of situation on social customs, practices and attitudes will be far reaching; it may destroy some of the negative aspects¹ of certain customs and practices, but, at the same time, it may destroy some of their positive aspects.²

The problem of limited employment opportunities in Nuku'alofa has been made more serious by accelerated migration in recent years. Although Nuku'alofa accounted for a higher proportion of those engaged in non-agricultural activities in 1956, the percentage of those so engaged actually declined from 27.8 to 24.8 per cent between 1956 and 1966.³ Moreover, while in 1956 over half of the working males, aged 20-59 years, in Nuku'alofa were engaged in non-agricultural pursuits (Walsh, 1964, 21), it was found in surveys associated with this study that in 1970

1 Among which are the tendency to be idle and live off the efforts of others and the discouraging effects such a practice can exert on the diligent.

2 One such positive aspect of the anga-faka-tonga is the readiness with which people provide for friends and relatives who are really in need - a kind of social security.

3 See Appendix I.ii.

the comparable percentage was only about 24 per cent.¹ The employment situation has, therefore, deteriorated. The seriousness of the situation can be better appreciated when it is noted that between 1966 and 1976, the projected total number of persons entering the work force will be 11,142 as against only 1,444 persons who will retire during the same period (Fiefia, 1968, 30). Moreover, there is "no large scale industry and little likelihood of any industries providing a major source of employment within the foreseeable future" (Johnston, 1968, 1).

In view of this it is difficult to reconcile Ward's (1972, 7) proposition - that in the eastern Pacific countries (including Tonga) urbanisation based on service occupations, government and tourism affords the best hope of improving the levels of living of the majority of the people - with the Tongan situation. There is no denying the positive contribution which urbanisation can make towards development. But the problem in Tonga is that the rate of urbanisation has not been accompanied by a comparable rate of expansion of non-agricultural occupations.² Unless the growth of secondary and tertiary activities is considerably improved, the large influx of migrants into Nuku'alofa should be controlled; and the Tonga Government is almost unique in having powers to do this. With respect to Nuku'alofa, Walsh (1964, 197) has argued that

1 It should be remembered that this percentage is based on a sample only, while Walsh's figure is based on census cards and has a number of qualifications (Walsh, 1964, 109-121).

2 It is pointed out in section 7.3 that available evidence suggests that the best basis for expanding non-agricultural occupations still lies in the primary sector - agriculture and fishing.

a town that is lacking in secondary employment and which is so completely dependent on the wealth of its rural hinterland - in this case the whole of Tonga - most definitely is not capable of further healthy growth without a corresponding expansion of the earning capacity of its hinterland. This, basically, is the main economic problem confronting Tonga today. Migration is merely a reflection of the malady; the solution must in part be sought in the source areas.

The influx of migrants into Nuku'alofa has also helped to aggravate the problem of landlessness in the capital. In 1966, 67 per cent of all Nuku'alofa adult males had no land, and in 1970 it was estimated to be between 75 and 80 per cent.¹ The existence of a swelling unemployed and landless class can have far-reaching social, economic and political implications.

Though social problems in Nuku'alofa appeared to be relatively mild compared with the physical ones, they are nevertheless giving, or should be giving, cause for concern. Officials of the Department of Justice stated that petty crimes and thefts were committed more often by migrants than other people.²

Some of the more effective measures of controlling migration to Nuku'alofa include the establishment of some relatively high standards of housing and of regulations making it more difficult for prospective migrants to obtain land allotments in Nuku'alofa. As Maude (1965, 86) has noted, internal migration would have been greater were it not for the fact that many who might leave their village are deterred by the

1 This estimation was based on information supplied by the Nuku'alofa District Officer, and the 'ofisa kolo of Haveluloto and of Ma'ufanga (suburbs of Nuku'alofa).

2 A similar observation has been noted by Cook (1969, 21) with respect to the island of Rarotonga in the Cook Islands.

difficulty and uncertainty of being granted an allotment". There is also much in Walsh's (1970, 44) suggestion on the "use of radio and other media to 'play-down' the attractions of Nuku'alofa and Tongatapu, for these are often highly exaggerated in the minds of the islands' population".

7.2: IMPLICATIONS

To what extent the existing regional inequalities and their associated problems will create future and perhaps more serious problems in Tonga is difficult to forecast accurately. What seems to be clear, however, from the evidence already discussed, is that given a continuation of the existing conditions, regional inequalities and their concomitant problems will persist and in all probability will increase. It should also be evident from the material presented what some of the major implications of regional inequalities are. Nevertheless, it is useful to refer, even at the risk of some repetition, to some of these implications.

Increasing differential access to the market sector

It has been noted that access to the market economy heavily favoured Tongatapu, and that over the past two decades there has been a clear trend for increased regional difference in this regard. There is every reason to believe that this trend will continue at an increasing rate, unless appropriate steps are taken to arrest it. If no such steps are taken, then it is only reasonable to believe that the sense of dissatisfaction and frustration which inhabitants of the outer islands have already experienced due to their comparatively poor circumstances will intensify. Such a

situation will undoubtedly affect, in an adverse manner, the attitudes of the people to the Government.¹ In fact, the inhabitants of the outer islands regarded their slow economic progress as a consequence of the paucity of government assistance. As they saw it, official policy had paid little regard to their welfare. This in turn will make it more difficult for the people to co-operate with the Government if and when the latter undertakes programmes designed to promote development of the outer islands. Discussions with a number of informants in the outer islands clearly indicated their feelings of disappointment with, and even of suspicion of, the Government. An indication of the types of problems that could result from such a situation can be gained by referring to Lasaga's study of the Tadhimboko of the Solomon Islands. Discussing the distrust felt by the Tadhimboko towards the Government, and the mutual lack of comprehension of each other's views,² Lasaga (1972, 290-292) observed

that although the Tadhimboko see the Government as their benefactor, they consider that it has done little to help them make money ... Advice by Government officers is not regarded as genuine by the Tadhimboko ... Advice by the agricultural officers is politely listened to but not followed.... If solid and lasting progress is to occur in Tadhimboko and the Solomons generally, it is essential that the type of Government-people relationship that has persisted since 1945, of mutual misunderstanding and suspicion of each other's motives, must alter ... It seems that in this regard the first step must be taken by the Government: it must act to end Tadhimboko suspicion of its motives.³

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- 1 It was pointed out earlier that the people of the outer island have always looked to the Government to provide the necessary facilities and institutions for development.
 - 2 A similar situation was observed by Sadaraka (1961) in the Cook Islands.
 - 3 Some of these points were discussed in the Tongan context in Chapter 4.5.

The implications of these kinds of feelings in Tonga in terms of social and political stability will be far-reaching and will provide an obstacle to the growth of the Tongan economy. A feeling of being the neglected section of the national population will have detrimental consequences on the development of Tonga as a whole, since it is clear that economic and administrative efficiency of any country depends on the effective co-ordination and integration of the people into a functional unit. It appears, therefore, that it is necessary to improve the cash earning opportunities in the outer islands. This has to be done by deliberate planning by the Government, for leaving it to the free play of the market forces will only perpetuate and intensify the existing regional differences.¹

Increased outmigration from the outer islands

Again, given a continuation of the existing regional inequalities, the current patterns of internal migration will be maintained, or even accelerated, and thereby compound the problems which have been brought into existence by such movements. With limited resources and a rapidly growing population, it is imperative that Tonga utilises its resources fully, a situation, which, as has been pointed out, would not be possible if the current rate of outmigration from the outer islands continues. Moreover, the selective nature of of out-migration from lagging areas is likely, as Hansen (1972, 122) has observed, to cause cumulative difficulties in those areas. Also, Tongatapu cannot go on taking migrants indefinitely without reducing the overall levels of living

1 This argument has been discussed in Chapter 1.2; also see the reference to Myrdal at the end of this section (7.2).

there. Already there is high unemployment and an increasing degree of landlessness in Tongatapu and the prospects of an appreciable improvement in employment opportunities appear rather bleak. Thus, to achieve a greater level of development, it is better to encourage people in the outer regions to remain there.

If in-migration from the outer islands is allowed to continue unchecked, shipping services, already very costly and inadequate, will become even less economic. This will lead to a reduced frequency of services, to higher fares, higher freight charges and perhaps increasing losses. Also, loss of population from the outer islands is unlikely to lead to larger-sized holdings and hence increased cash crop production because of the existing land laws. Rather, decreased production is quite likely and this will help to further reduce the demand for shipping services. In addition, the Government and, to a lesser extent, the missions will be reluctant to expend scarce funds on roads, ships, schools and hospitals in the outer islands since with a falling population such facilities will soon prove to be in excess of possible use.

These, then, are some of the implications of existing regional inequalities in Tonga. It should be evident from what has so far been said that the existing inequalities are on several accounts far from desirable. Furthermore, the evidence available suggests that the situation in Tonga has been, and is, subject to the influence of Myrdal's mechanism of circular and cumulative causation, and that

if things were left to the free play of market forces, socio-economic progress would be confined largely to the region already leading in development, "leaving the rest of the country more or less in a backwater" (Myrdal, 1957, 26).

7.3: SOME RECOMMENDATIONS

Throughout this study a number of recommendations have been made regarding steps that should be taken to overcome and/or prevent some of the problems associated with regional inequalities. Some of these recommendations are expanded in this section and further suggestions are also made. The emphasis here is on measures aimed at co-ordinating and integrating the development of the regional economies and at utilising more fully the resources of the outer islands.

A more balanced spatial development advocated

It should be evident from what has already been said that a more equitable spatial distribution of the fruits of economic development in Tonga is most desirable - socially, economically and politically. Indeed, the welfare aspect of development alone would call for further investment in the outer islands. It is also a basic argument of this study that a more 'balanced' development of the Tongan economy will lead to a higher overall rate of growth and hence to a higher average level of living. As already pointed out, there exists strong evidence that the outer islands have considerable potential for development. The point of view in this study, however, is emphatically not one of special

pleading "for" balanced development in the sense of "against" concentrated development. Rather, it is here argued that, for Tonga, the most sensible way to promote greater overall socio-economic development is for a more balanced development policy to be followed. This policy should aim at integrating the various regions of the Kingdom. Moreover, it should represent not so much efforts aimed solely at eradicating existing regional disparities and establishing a "mean" for the whole economy, but rather attempts to ensure a greater and better utilisation of the resources of each region and the development of "growing points", which, in turn, will lead to improvements in levels of living in all those regions and a greater equality in material well-being.

Too often in countries striving to promote economic growth, concentration of efforts at the growing regions and, conversely, virtual neglect of the lagging regions have been regarded as the most sensible approach or even perhaps as inevitable.¹ This can often be a mistake. Not infrequently too little attention has been given to the potential of the lagging regions, and to the long-term effects of regional concentrations in underdeveloped countries, especially those whose economies are predominantly agricultural, with limited land resources, high population densities and rapid rates of population growth.

In Tonga a more regionally oriented development would not, as some may argue, necessarily mean diversion of scarce funds to depressed regions, resulting in below average rate

1 As Hirschman (1958, 185) and Friedmann (1966, 15) have pointed out, economic operators consistently "overestimate the profitability of investments at the centre relative to the periphery".

of national growth. The development potential of the Ha'apai and Vava'u regions is believed to be of such an order that investment of funds there will soon pay handsome dividends and provide more raw materials for Tongatapu, thus permitting expansion and possible development of processing industries. Moreover, in more ways than one, the development of those regions will require rather a more efficient organisation and utilisation of resources already in those regions or in Tongatapu, and not necessarily an injection of new resources. For instance, a reorganisation of the shipping schedules of the various vessels operated by the government-owned Pacific Navigation Company and by private interests will greatly improve the present inadequate shipping services without any need to purchase more ships.

Growth pole¹ strategy recommended

The growth pole hypothesis has been discussed fairly comprehensively.² Briefly, it has been originally derived from Perroux's (1955) concept of pole de croissance, and was based on the observation and subsequent recognition of the fact that development does not appear everywhere and all at once; rather it occurs in points or development poles with variable intensities (Nichols, 1969, 4).

1 In the context of this study, a growth pole or centre is a regional capital, equivalent to Friedmann's (1966, xv) core region of the second rank. Strictly speaking, however, a growth pole generally refers to an area or a group of towns which is either developing or planned for development, while a growth centre usually refers to a town within a region. The size and the current level of development of the Tongan economy permit the treating of the two terms as synonymous in the context of this study.

2 See, for example, Darwent (1969), Lasuen (1969), Nichols (1969) and Kuklinski (ed.) (1972).

Among the several approaches to the problems of regional development, the growth pole policy is one. Together with similar concepts such as growth centres, growth areas, growing points, development nuclei, core areas, core regions, etc., the growth pole concept has attracted "increasing attention in the search for tools to solve problems of imbalance in interregional development in industrialised as well as in non-industrialised countries" (Hermansen, 1972, 2). Following Hirschman (1958), among others,¹ this study advocates the development of growth poles as a means of achieving both national growth and regional development in Tonga.

A growth pole strategy appears suited to Tongan conditions. In a country with limited non-agricultural resources it makes good sense to concentrate these resources at a limited number of centres, either at points with locational advantages or where it is possible to generate development with strong expansionary momentum. Moreover, in a country such as Tonga in which there are numerous socio-economic obstacles to development,² a growth pole approach is one way of attempting to diffuse 'development-consciousness' into the laggard regions.³ Also since the promotion of national integration is considered to be an important condition of economic and administrative efficiency, the development of growth poles will be of great assistance in this direction. Finally, the very archipelagic nature of the Group necessitates

1 For example, Friedmann (1966) and those mentioned in the above footnote.

2 See section 7.4 and Appendix I.iii.

3 Frankel (1953, 95) has succinctly pointed out that development "depends not on abstract goals of and the more or less enforced decisions of a cadre of planners, but on the piecemeal adaptation of individuals to goals which emerge slowly and become clearer only as those individuals work with the means at their disposal, and as they themselves become aware, in the process of doing what can and ought to be done next".

the emergence of growth poles.

In a sense this has been the situation in Tonga, with the regional centres being the points of concentration in their respective regions. It is difficult, however, to regard the regional centres of Tonga as growing points or growth poles, at the present time, in the strict economic sense, since all of them lack industrialisation, 'the dynamic force in development' (Myrdal, 1957, 29). In addition, the great majority of their populations are engaged in agriculture, average incomes are low, and, with the exception of Nuku'alofa, they do not as yet provide effective demand for the produce of their hinterlands. Nevertheless, because of their particular functions and characteristics, such as outlined in Chapter 2.2, they may be regarded in some degree as growing poles or points with the potential to become growth poles. Already, Nuku'alofa is an incipient growth centre. In short, the basis, albeit a weak one, already exists for the adoption of a growth pole strategy.

With this in mind, then, it is important that in drawing up a framework of development policy special attention should be given to measures which encourage greater economic growth, promote the development of the regional centres, stimulate spread effects, and channel investment into those sectors which are likely to have further and multiplier effects on development.

The need for an agrarian development policy

An examination of the past and present socio-economic situations and their possible future trends suggests that economic growth and regional development in Tonga must be

closely bound up with agricultural development. The development of fisheries, tourism, handicraft and other industries will all help; they will not, however, be major factors. So the major scope must be in the development of agriculture and industries based on it (Sevele, 1972). In this connection, therefore, the formulation and implementation of a long-term agrarian policy is imperative.

Tonga is a predominantly agricultural economy of small-scale farmers who require considerable guidance and technical assistance on commercial farming and related matters. The great majority of these growers are, like those in other parts of the Pacific, in transition towards a peasant society, "in which production for subsistence is combined with production of cash crops for a distant export market. Many of the troubles and difficulties arise because this transition is not completed, as well as because the perishable crops provide a precarious source of cash income" (Belshaw and Stace, 1955, 13). It is essential, therefore, to have a long-term agrarian plan or policy. Such a plan would not only assist farmers with regard to the type of crops they might grow or the kind of livestock they should raise but would also help in the preparation of plans for crop processing and marketing. In addition, it would indicate the lines along which agricultural research should follow.¹

1 Belshaw (1956, 1) has argued that the prime need in the Pacific Islands is for the improvement of farming methods and levels of efficiency under the guidance of adequate and sympathetic extension workers. A similar observation was made by Britten (1968, 23) when he wrote that "it is clear ... that the problem in most areas of the South Pacific is agricultural production. The key to agricultural production is agricultural education accompanied by agricultural research".

Among the major aims of such a plan should be included increased productivity from all land already occupied, expansion and diversification of farming in new areas, expansion of livestock (and fishing) industry, removal of disincentives to production, and, above all, due recognition by the Administration and the people of the crucial importance of agriculture in the development of Tonga. Hardaker (1970, 80-84) has made a number of sound recommendations in this connection, and serious efforts should be made to implement them as soon as possible.

It is the argument of this thesis that a successful agrarian programme will, in addition to making farming more productive and rural areas more attractive places to live in, provide the basis for successful establishment of small-scale processing industries in the regional centres. This in turn will not only help the development of regional centres but will also provide for the inevitable and increasing movement of Tongans from the villages into secondary and tertiary industries. Development of such industries will in turn - or in a circular and cumulative manner - promote further development of agriculture.

In this connection, it should be stressed that Tonga is a labour-surplus but resource-poor economy. It is, therefore, imperative for the country to carry out a vigorous programme of population control without which its limited land resources must become overcrowded and its efforts at improving levels of living negated. As Fisk (1970, 63-64) has observed with reference to Fiji, "where population control is practicable, there is no economic development measure that offers so assured an improvement in income per head".

Further, without population control, the problems in Tonga stemming from regional inequalities will, in all probability, be compounded.¹

The scope for increased copra and banana production was noted in Chapter 4 to be far from being fully realised, even within the limits of existing resources. The need to explore ways in which to increase the production of these commodities cannot be over-emphasised. Another line of development that warrants investigation is the possibility of converting the small and especially isolated islands of Ha'apai and Vava'u into coconut plantations worked by a labour force on a seasonal or contractual basis.² Cattle raising, including pig farming, could also be added to growing coconuts, as had been successfully done on European-owned coconut plantations on Tongatapu. Not only would such a development lead to a better use of Tonga's limited resources, but would also help satisfy the considerable demand for meat which currently is being supplied from overseas.³

The potential of the Vava'u group for commercial agriculture appears considerable and should be exploited more fully. According to the British Colonial Office's Annual

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- 1 Because little attention is given in this study to the importance of population control, the topic should not be regarded as of minor importance in any programme of economic development for Tonga, but rather as of only peripheral relevance to the central theme of the study. Undoubtedly, the rate of population growth will prove critical in determining the course and the rate of growth of the economy.
 - 2 Some of the smaller island dependencies of Mauritius and the Seychelles are developed in this way (Benedict, 1967, 9).
 - 3 Meat imports in each of the past five years have, for example, exceeded the \$400,000 mark (see Table I.4).

Report on Tonga for the year 1946 (p.9),

some years ago there was a flourishing industry in the export of oranges and other citrus fruits, mainly from Vava'u, which was famed for its citrus products ... In 1946 a New Zealand firm started an industry in Vava'u for the extraction of fruit juices, not only from citrus fruits, but also from pineapples and passion fruit. The product is of excellent quality.

These industries no longer exist and only small quantities of pineapples are being exported. Attempts should, therefore, be made to revive these industries.

Fishing and tourism

Commercial fishing is another line of development that appears to offer considerable promise. It has been noted, for instance, that Ha'apai has rich marine resources awaiting greater exploitation. The success so far achieved by Fathom Fisheries Ltd. is a clear illustration of this potential. Informed sources in Tonga see the development of commercial fishing in Ha'apai as one of the brightest prospects for development in the Group. The demand for fish both from within and outside Tonga is considerable. Tonga, for example, imported preserved fish valued at \$71,000 in 1967 and \$95,000 in 1969; and already sizeable export orders have been placed with Fathom Fisheries Ltd.¹

Tourism is also another industry that apparently holds great promise for the growth of Tonga, especially of the Vava'u group. While every encouragement should be given to promoting this industry, the present author does not believe that "of all the sectors in Tonga, Tourism is

1 Manager of Fathom Fisheries Ltd. (pers.comm., 1971).

considered to offer the greatest potential to the Kingdom" (DPII, 35). As one fiscal expert pointed out,

it has been proved by other experiences that tourism can help in the development of the "modern sector" of the economy, but that its impact in the "traditional sector" is very limited; the economy of Tonga is mainly traditional, suffering from problems derived from excess of population and economic fluctuations (Martner, 1970, 4).

Interregional trade and improved market linkages

The most obvious mechanism for the transmission of growth in space seems to be interregional trade. In the early stages of regional development, when the systems of communication and transport between the various regions are inadequate, trade between these regions may be possible on the basis of comparative advantage. One of the most essential considerations to be taken into account in drawing up regional development programmes is, therefore, to single out for development those industries in which each region has a comparative advantage. Some of the fields of development suggested above will assist in this connection. One effect of trading will be a certain degree of specialisation, accompanied by economies of scale which will make for higher productivity, in addition to fuller utilisation of resources. The increasing per capita income that will accrue will allow for higher savings and investment and a cumulative process of development will thus be set in motion.

All this should go a long way towards the development of the regional growth poles and the development of each region as well as building up the necessary linkages between the regional markets, a condition that is considered of vital importance in the transmission of growth over space. As

Williamson (1965, 7) has argued, "part of the national growth process is simply economic unification of regional markets". However, efforts should be directed not only at further development of the regional centres but also at the improvement of transportation, communication, and organisational linkages between those urban centres and the rural areas. In modern societies, of which Tonga is already a part, productivity and level of income are not merely the result of the ratio between man and his tools, or his land, but it is this in relation to the organisational efficiency which the enterprise, the market centre and the whole economy provide.

Explicit declaration of government interest in development of outer islands

An important step to be taken in any effort to develop the depressed or less favoured regions is for the Government to explicitly express interest in and willingness to help the inhabitants of those regions. As Walsh (1969a, 13) has observed when referring to Vava'u, "generally government needs to be seen to be active in Vava'u for economic decay is in no small part a consequence of a lack of confidence arising from a feeling of neglect". Similar remarks could also be made of the other island regions.

Decentralisation

One of the more effective ways of ensuring the success of the proposed growth pole strategy is for some government services to be decentralised. It has been noted that Government is by far the major employer in Tonga, and that government department and government-sponsored bodies are concentrated in Tongatapu, especially Nuku'alofa. It is

believed that some decentralisation of government services will not only mean, among other things, an increase in paid jobs and purchasing power in Ha'apai and Vava'u, but may also attract some of the private enterprises to those regions, especially if decentralisation is accompanied by lucrative concessions. Such development will result in higher level of income and will encourage the people of those regions to remain there rather than to migrate to Tongatapu.

Since education is one of the major reasons for out-migration from Ha'apai and Vava'u to Tongatapu, it is here felt that as many district high schools as required by the local populations should be formed in Ha'apai and Vava'u, and that local curricula be introduced into these schools. Some of these schools could, for example, specialise in boat-building, carpentry, pig-farming, fishing, handicraft-making, as well as teaching about the local environment.¹ This should encourage the local people to stay by making the rural and remote areas more attractive places to live in. Coupled with this should be an attempt to discourage the sending of children to Tongatapu for lower secondary or non-academic education which could be provided locally.

But because of the fragmented nature of the Kingdom, the relatively small populations of the outer regions and their predominantly agricultural economies, it is difficult

1 This is comparable with Bellam's plea for 'rural emphasis' in the educational policies as a means of moderating or checking the movement to the capital of the Solomon Islands (Chapter 2.1). The heavy academic bias of the education system in Tonga has already been referred to in Chapter 3.2; and attention was drawn, in Chapter 4.5, to the need for agricultural training.

to envisage any significant degree of decentralisation in the immediate future and hence any marked improvement in paid employment and other tertiary services. A higher level of development will, however, bring about some decentralisation, expansion and creation of new activities sufficiently large to ensure the emergence of Pangai¹ and Neiafu as effective growth poles in their respective regions. Thus, it is, as has been pointed out, crucial that the resources of the outer islands be developed more fully.

Improvement in transport

It has been stated throughout this study that there exists a fundamental need for improvements in transport and communications before effective alleviation of regional imbalances in socio-economic development can be achieved. Further, maximum geographical spread effects of developments from the proposed growth poles will not be achieved if transport and communications were not improved.

One of the most fundamental causes of regional variations between the regions under consideration has been, and is, inadequate shipping services. More efficient shipping services and more suitable types of vessels² will certainly play an important role in achieving greater development

1 A road linking Lifuka with the adjacent islands will go a long way towards the emergence of Pangai as a growth pole. The possibility of linking the islands of Ha'ano, Foa, Lifuka, Uoleva and 'Uiha (Fig. 0.4) by roads is thus worthy of a feasibility study.

2 The fragmented nature of the Ha'apai and Vava'u islands, especially the former, suggests that small fast ships will be more suitable and economical. A pre-investment study of the type of suitable ships will be worthwhile.

especially of Ha'apai and Vava'u. Increased copra production, diversification of agriculture, and other opportunities for earning money in places outside Tongatapu are heavily dependent on efficient transport services. Development of transportation facilities can extend the market area and reduce the costs of distribution for farm output.

The provision of regular and reliable shipping services will, in addition, facilitate the supplying of trade and consumer goods, rendering life on the small and somewhat isolated islands more comfortable and hence encouraging more permanent residence there. Moreover, a rise in the level of living in the outer islands will undoubtedly be reflected in the demand for a greater share in the social, educational and economic facilities which are concentrated at the main centres. This demand can be met in part by the provision of more frequent and regular scheduled services.

It is the author's opinion, and one shared by a number of informed sources in Tonga, that, although the existing fleet of vessels in Tonga is still inadequate, arrangements can be made so that they will provide more regular and frequent scheduled services which will greatly improve the present situation. What is needed is a better co-ordination and scheduling of services. Apart from the inter-island ferry, which plies only between the main regional centres, there is no scheduled service at all either between Tongatapu and Ha'apai and Vava'u, or even between the islands within each of the latter regions. At the time when the Ha'apai survey was undertaken there was a government vessel at Pangai which could have been used to provide some regular services

within the various islands of the group, instead of being largely used for the Governor's visits to the islands, trips which were not very frequent. It is also suggested that greater involvement in commercial shipping by private enterprise be encouraged to relieve the Government of some of the responsibility of internal cargo movement.

The need for proper planning organisation

One of the first practical problems to be encouraged in applied regional development is the need for a proper organisation or organisations to undertake regional development programmes. The present planning system in Tonga consists of the Development Coordination Committee, under the aegis of the Ministry of Finance, and consists of the Prime Minister, Crown Ministers, Heads of Departments and the Development Officer. At best this is a temporary body and economic planning is entrusted almost entirely to the Development Officer. There is, it is believed, an urgent need for a separate planning officer or department¹ staffed by a number of economists or persons with training in this field.²

The need for proper planning organisations is particularly urgent since regional and local governments are absent altogether, and since the national government is too centralised, and has so far displayed no great interest in

1 Along similar lines to Fiji's Central Planning Office or Western Samoa's Department of Economic Development.

2 Jeuda (1971, 26-27) has noted that one of the major constraints faced by the Government in its efforts to develop the country is that of "expertise, sheer lack of know-how, particularly in the field of economic planning; this is linked with bureaucratic delays which prevent what expertise exists from being effectively used".

the development of areas outside Tongatapu. There is an equally urgent need to involve the public, especially prominent growers and businessmen, in both the planning and implementing stages,¹ a situation which is not possible under the present system.

Local government

There is no reason, however, why local governments with responsibilities for and a vested interest in their own areas could not be set up and encouraged to play a useful role in encouraging a more geographically balanced development of the Kingdom. By mustering local energy and initiative in carrying out and maintaining developmental projects, government finance can be saved and social and economic progress spread more rapidly to the outlying areas. This has already been demonstrated in village water supply projects, road construction, church and school building, and could also be applied to other aspects of village infrastructure. A well-developed spirit of competitiveness between village and districts - a characteristic feature of Tongan social life - plays an important part in these communal activities. There is much to suggest that this competitiveness is a creative influence of considerable potential value if directed into other areas of socio-economic development.

It is suggested that local governments should consist of a number of elected members, presided over by a Regional Officer. Local representatives of the various government departments should, because of their expertise, be advisers

¹ Also see section 7.4.

to the local governments and should attend meetings. Local entrepreneurs and traditional leaders¹ should also be considered for membership. Consideration should also be given to using the fono for wider purposes in this connection. It is considered that local governments should not be set up simultaneously in all areas; it is suggested that an early start be made in one or two suitable places, the system being extended gradually to other areas.

In essence, these point to what is being described as community development which implies, among other things, a coordinated approach in the provision of the necessary services and facilities to stimulate and assist the people themselves to exercise initiative and participate in self-help activities. One of the basic problems confronting development attempts in Tonga has been the lack of real community loyalty and positive impartial leadership. The establishment of local governments² along the lines suggested above and the promotion of community development would go a long way towards achieving a greater and more lasting degree of community loyalty and the development of positive local leadership which "is decisive for successful adaptation to external change", a condition necessary for regional development (Friedmann, 1966, 24).

7.4: SOME GENERAL OBSERVATIONS

In most Western countries, economic growth and development

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- 1 The practical influence of these types of persons has been demonstrated by the examples of 'Alo 'Eua and Fr. Callet mentioned in Chapter 3.3.
 - 2 See MacDonald (1972, 25-27) for a discussion of the role and limitations of local government institutions in the Gilbert and Ellice Islands.

have a momentum which is, to a large extent, independent of government initiative. In Tonga, as in most under-developed areas, the Government must both initiate and support socio-economic progress as a prime responsibility.¹ The people must also be prepared to play their due roles. The significance of these factors are briefly discussed in this section, and some recommendations are made on what changes should be effected in those factors if greater socio-economic development is to be achieved.

Leadership and decision-making capacity

Socio-economic development is not simply a function of the supply of productive resources; other factors are as equally important but are in critically short supply in Tonga, as indeed throughout the underdeveloped world. One of these is the ability to make decisions. Hirschman (1958, 25) has argued that even if all the factors necessary for economic development are present in a country, the problem is to successfully bind together and utilise these factors. In addition, the country must desire change and must recognise its requirements. Hirschman's (1958, 25) diagnosis of the situation is

simply that countries fail to take advantage of their developmental potential because for reasons largely related to their image of change, they find it difficult to take the necessary decisions needed for development in the required number and at the required speed.

Both the desire to change and the ability to evaluate the potential of a situation and to take advantage of it are scarce in Tonga. It is noted in Appendix I.iii, for

1 Also see Appendix I.ii - I.iii.

example, that Jeuda (1971, 26) has observed that one of the main constraints to economic and social development in Tonga is the lack of desire or "political will" and of ability on the part of the Government to institute the necessary changes.¹ It is also noted in the same Appendix that Walsh (1967b, 121-22) has ascribed the lack of development in Tonga to "weaknesses in government leadership" which, he added, "exclude the people from a sense of participation in the economy". A similar criticism has been made by Lorenzo (1969, 5) when he stated that one of the striking features of Tonga's development policy

is the complete lack of participation by workers and employers in social and economic planning. The Government has not yet realised that the goals of economic growth and social progress cannot be achieved without the active participation of workers and employers at all stages of plan elaboration and implementation.

There has also been a tendency to undertake economic ventures without first seeking appropriate expert advice. This has contributed in no small measure to the failures of some of the schemes undertaken by the Government in recent years (Latukeyu, 1967, 161). One of these schemes involved the Coconut Processing Corporation of Pago Pago in American Samoa. The Copra Board in the late 1950s invested about \$450,000 in the Corporation, with an understanding that further shares would be purchased. Under this arrangement whole nuts (estimated at 30 million per annum) would be transhipped from Tonga to Pago Pago, made into desiccated coconut (estimated at 600 tons per annum), and possibly other products, and then sold in the United States.

¹ This agrees with Myrdal's (1968, 257-303) finding for India. He argued that both national consolidation and economic development in India have been inhibited specifically by the inability and unwillingness of those who wield political and economic power to carry out effective social and economic reforms.

The venture was a complete failure and thus Tonga lost funds which it could ill afford to waste. Couper (1967, 295) has noted that developmental projects undertaken in Tonga between 1957 and 1961 were financed from internal capital sources. Almost "all revenue from imports and exports was used to purchase vessels, machinery and trucks and to pay for the construction of copra and produce sheds and offices". The development process never, however, became "self-generating for the development decisions in Tonga were made on an ad hoc basis and were immensely costly compared with their immediate returns".¹

What, one may ask, is the relevance of all this to explaining regional inequalities? The relevance lies in the following. The role of the Government and its Boards is very crucial to the development of the economy, for with foreign overseas investment not, until recently, actively encouraged, there is no other body that has access to capital sufficient enough to undertake major developmental schemes. Thus, if the Government is weak or incompetent, then little economic growth ensues. With limited progress occurring in the national economy, the efforts at, and the benefits of, development have been restricted largely to Tongatapu. Added to this is the general lack of awareness in Government of the urgent need to evaluate and develop the potential of the outer islands.

A major factor in the failure of the Government to achieve greater social and economic development lies in the fact that in the recruitment of personnel and the assignment

1 See Walsh (1967a) for further critical comments on some of the ventures undertaken by the Government in recent years.

of tasks, particularly at the higher levels at which the more important decisions are made, the ability to do the required work and the sense of responsibility in performance are often not taken into account. And the "admission of exceptions may mean the difference between success and failure" (U.N. 1955, 20). Further, the Tongan people do not, in general, appreciate fully the fact that the progress of a community hinges, to an important degree, on the provision of adequate opportunities for its most able and energetic members, irrespective of their status in society. Finally, if the "wealth, power and prestige of a society is strongly polarised between two groups with little relative mobility between them", as is the case in Tonga, social change on the structural level conducive to the creation of new economic opportunities is unlikely to occur (Nash, 1958, 140).¹

It is obvious, therefore, that higher and lasting levels of development demand some changes in the socio-political system. As Belshaw (1960, 126) has argued, economic development requires "change in the location and role of leadership". This is not, it must be emphasised, a plea for whole-scale changes, for there are many features of the existing socio-political system that should be retained.

1 A similar observation has been made by Ward (1971, 54) with respect to the Fijian society. "Fijian society", wrote Ward, "is based on an established system of kinship and status - a traditional legacy of social cohesion which perpetrates aspects of culture that unfortunately, tend to impede economic and social progress. This perpetration of socially cohesive customs enables the traditional leadership to retain some of its old status. Many of Fiji's most distinguished chiefs have sometimes been more concerned with the preservation of culture than with the need for economic development".

What needs changing are those aspects of the system that are incompatible with the new demands of socio-economic development which the country is seeking.

People's desire for and efforts expended on development¹

Other important factors determining the rate and extent of economic growth and development are the desire on the part of the people for higher levels of living, and the efforts they are prepared to make in order to realise those desires. It was noted in Chapter 4 that a good proportion of the households surveyed could have increased their output of cash crops or fish but did not do so. For some of these households it was a case of their being fairly content with existing levels of living. But the great majority expressed a desire for higher levels of living. There is little doubt that most Tongans do want higher levels of material well-being, as is shown by their readiness to leave their home islands or villages in search of better economic opportunities. At the same time, however, some of them are not sure as to how to achieve those aspirations or are hampered by various disincentives, while others are simply not prepared to make the necessary sacrifices beyond a certain point. It is not that they (the latter group) have "little interest in the outside world which intrudes on them in the form of the market sector" or "little willingness to 'develop'",

1 Also see Appendix I.iii for a discussion of social and economic attitudes.

as Lockwood (1971, 206) has said of the Samoans.¹ Rather, it is a case of their lacking the drive and the acquisitive mentality needed for greatly increased material welfare. While the desire for more material goods and services is always present in the individuals, the sustained efforts required to acquire them are not always forthcoming.

In Lewis's (1965, 11) terminology, they lack 'the effort to economize' which he defined as the propensity to reduce the cost of a given product or to increase the yield of a given effort or resource. He argued that for this attitude to be present a high valuation must be placed on such factors as the accumulation of goods, on hard work, risk-taking, on capital formation and on innovation; its existence also depends on the suitability of the institutions of the society concerned.² However, in Tonga, other things are valued besides a higher level of material well-being. Indeed, some of the most significant obstacles to development in Tonga,

1 It is difficult to agree with Lockwood's assessment of the situation in Western Samoa considering the vast numbers of Samoans that have migrated overseas, especially to New Zealand, in search of better social and economic opportunities. In 1966, for example, there were 11,842 Samoans in New Zealand (N.Z. Yearbook, 1968, 86); and between 1966-71 there has been an average of 1,200 Samoans migrating to New Zealand for permanent residence, and an average of 1,335, during the same period, for a stay of up to 3 months, mostly on working holidays (Dept. Labour, Wellington). Moreover, Pitt (1970, 262) has argued that the most important dynamic in the "internal generation" of economic development is the "strong desire for European goods".

2 These views have been shown by Stace (1956) to apply to the situation in Western Samoa.

as in other Pacific territories,¹ are cultural, social or psychological in nature.²

There is little indication, at least as yet, of any significant changes in the attitudes of the majority of Tongans towards economic development. But the population is rising very rapidly and, judging by the existing evidence, most Tongans will by the turn of the century experience declining levels of living as their resources become scarce. The situation of 'primitive affluence' which the Tongans have been taking for granted cannot last indefinitely. Major changes in the attitudes of the Tongans are, therefore, necessary if higher and lasting levels of economic growth and development are to be achieved. Progress requires the acceptance by the people at large of the need for social change; and, as many of the reasons for little or lack of growth and development appear to be "cultural in origin, cultural solutions are most likely to solve them" (Walsh, 1970, 44).

Conclusion

This Chapter has shown that already there exist a number of problems which are largely due to regional disparities in socio-economic development. Differences in cash-earning opportunities, for example, have led to feelings of dissatisfaction among the inhabitants of the outer islands where such opportunities are least. They

1 See, for example, Spate (1959), Watters (1961; 1969), Fox and Cumberland (eds.) (1962), and Lockwood (1971).

2 This statement is elaborated upon in Appendix I.iii.

have also led to considerable migration from the outer islands to Tongatapu, movements that have created a host of problems to both the source and the destination areas.

It was indicated that perhaps the most important implication of the existing regional disparities in development is that they are, in all probability, going to intensify unless appropriate steps are taken to moderate them. It was also suggested that these inequalities are harmful for the growth of the national economy. A greater utilisation of the resources of the outer islands would achieve higher levels of national growth and regional development, and a growth pole approach was advocated as the best strategy for achieving this goal. A number of recommendations were made in this connection.

Some brief observations were made on the urgent need for an agrarian development policy, the crucial importance of population control, the need for a reappraisal of the socio-political system, and the significance of 'the effort to economize' and of cultural and psychological factors in the context of economic growth and development.

CONCLUSION

The principal aim of the study has been to examine the nature and extent of interregional variations in the patterns - the geography - of socio-economic development among the three main island groups of Tonga. This was attempted by analysing certain indices of level of living. The concept of level of living employed was that of the degree of material well-being of the average household, which, in general, depends very much on available productive resources, facilities and incentives to utilise these resources in earning a livelihood. In short, what have been considered, in a comparative manner, are certain aspects of the relationship between man and his environment in the three main island regions of Tonga. In the following paragraphs, an attempt is made, firstly, to underline some of the conclusions of this study; secondly, to highlight in general terms the value of the study; and, finally, to offer suggestions for further research.

Some general conclusions

Perhaps the most important conclusions to have emerged from this study are simply that already there exist considerable regional disparities in the levels of development in Tonga, and that there is an urgent need to moderate some of these inequalities. On the basis of these, and other conclusions already mentioned, there is a great deal of justification in the complaints, quoted in the Introduction, expressed by the inhabitants of the outer islands. These conclusions

also indicate that so far there has been a general lack of awareness on the part of the Government of the urgent need to develop the outer islands more fully and to moderate some of the existing inequalities. Several other specific conclusions have been drawn in each Chapter, but there is no need to refer to them again. There are, however, a few general conclusions which deserve mentioning.

It has been argued that while the cash sector of the economy is increasingly becoming the more attractive one, the subsistence sector is still the more important. One corollary of this is that efforts at economic growth and development which concentrate largely on the cash sector, ignoring subsistence production, may be of little benefit to the economy in the long run: the consequent decline in subsistence production may offset any increase in exports through greater imports of foodstuffs. Already a considerable proportion of Tonga's total imports is made up of foodstuffs which could be produced locally.¹ The author believes that Tonga could produce all its food requirements, and the establishment of import-substituting industries, not only of foodstuffs but also of other commodities, will be a major step forward in the development of Tonga.

A major factor to have emerged from this analysis is the crucial importance of the primary sector - agriculture and fishing. Unfortunately, the total picture of this sector, especially of agriculture, is not reassuring when seen against the increasing and more varied wants of the Tongan people. The agricultural potential of the country has been far

1 See, for example, Table I.4.

from being fully utilised, production has not shown cumulative increases in recent years, and agriculture, as an occupation, has generally been accorded low status. It should be more than obvious that attempts to increase productivity and hence improve levels of living should start with the primary sector (Sevele, 1972). As Myrdal (1968, 678) has observed of the developed countries, almost all of them "initiated economic development and industrialisation from a base of self-sufficiency in food and sometimes a surplus".

The importance of the socio-cultural and political factors in analysing and understanding the patterns of socio-economic development in Tonga has also been demonstrated. Thus attitudes towards hard work, accumulation of material wealth, fulfilment of various social obligations and so on, were shown to be important factors determining the social and economic behaviour of the average household. The political system was also shown to have exerted a crucial influence on the patterns of development.

Value of the study

In providing hitherto unknown data on the regional levels of socio-economic development in Tonga, and in suggesting explanations as to the reasons why they vary from one region to another, the present study seeks to make a contribution to greater knowledge and understanding of the geography of Tonga. In Tonga, as indeed throughout the underdeveloped world, perhaps the most important single aim of the great majority of the people is to raise their currently low levels of material well-being; one of the prerequisites of fulfilling this objective is a good understanding of the

behaviour of the variables involved. In this connection, it is hoped that this study makes a useful contribution.

It is often considered that the simple way of life associated with the subsistence economy and its limited demands is socially more desirable than the impersonal materialism associated with a money economy. Be that as it may, it is an inescapable fact, as this study has revealed, that the majority of Tongans desire an improvement on their existing low levels of material well-being. This is indicated by the magnitude and direction of internal migration in recent years. Despite a traditionally strong loyalty to family, village and island, a relatively high rate of migration has occurred and is occurring, indicating that the economic considerations are sometimes stronger than the social ties which bind them to the home settlements. The Tongans are being drawn more and more into the orbit of the market economy, and in this way Tonga follows the rest of the underdeveloped world.

The present study also makes a contribution to the theory of regional inequalities in its general corroboration of Myrdal's theory. Myrdal's principle of circular and cumulative causation provides a sound explanation of the regional differences in the socio-economic phenomena investigated. So far the market forces have, by and large, not been interfered with, leading to a situation of cumulative causation. A change external to the system is required if it is desired to arrest the cumulative process. The findings of the study also show agreement with those of Williamson (1965), O'Connor (1963) and others.

With specific reference to Tonga, these and other

conclusions are of importance to the policy-makers since measures directed, say, to decentralisation of population and of economic activity to the peripheral areas "are most successful when they are moving with, not against, the economic tide" (Hicks, 1959, 166). They are also of importance since changing patterns of economic growth and development are "accompanied by changes in spatial arrangements, and for each major period of development there will be found a corresponding structure of the space economy" (Friedmann, 1963, 53). Although the findings of this study apply specifically to Tonga, because of the basic similarities of the physical settings, socio-cultural values and economic systems, they also have some relevance to the South-west Pacific Island region as a whole.

If the present account of interregional variations in Tonga offers an important lesson for socio-economic planners in the underdeveloped countries, it is that market forces cannot be allowed free play, otherwise existing spatial inequalities will increase, while the people are increasingly demanding a more equitable distribution of the material benefits of development. In attempting to develop the economy the government must duly recognise that it has a two-pronged task: to improve the performance of the national economy (economic growth), and at the same time to spread the fruits of development as equitably as possible throughout the whole of that society (economic development). Very often there is a conflict involved in attempts to achieve these two goals simultaneously: herein lies one of the basic contradictions faced by the underdeveloped world.

Suggestions for further research

At many points in this study, the need for further research has been apparent. Some of the more important areas are summarised below.

- (a) There is need for improvement of statistical material bearing on the structures of the national and the regional economies, and on output and consumption patterns.
- (b) There is also need for assessing the resources and potential for development of the country. An investigation along the lines of the 'Burns Report' (1960) for Fiji or Stace's (1956) economic survey of Western Samoa would be very useful. With respect to the outer islands, feasibility studies of commercial fishing in Ha'apai and processing industries in Vava'u are examples of what could be done in this connection.
- (c) More detailed and precise information on the internal migration patterns should be obtained in order to determine which people are moving, their source and destination areas, why they are moving, what can be done to assist the areas which have been, and are, adversely affected by migration and what efforts should be made to guide this mobility.
- (d) A more specific and detailed study of the alternative approaches to economic growth and development which will be most appropriate to the Tongan situation should be undertaken. Some suggestions on how this could be undertaken were given in Chapter 7. The report by Belshaw and Stace (1955) on a programme for economic development in the Cook Islands would be a very useful guide in this regard.

- (e) There is need to investigate what steps should be taken to ensure that improved transportation and communication will not further increase the existing disparities between Tongatapu and the outer islands.
- (f) One of the most crucial and fruitful areas for research concerns the operation on socio-economic development of socio-cultural, political and even religious factors. Such research should aim at identifying not only the inhibitive effects of those factors on development but also the positive contribution which they can make. A study of the economic and social problems facing the Tongan people, along the lines of the 'Spate Report' (1959), would be very useful.
- (g) Finally, an examination of social inequality is recommended to supplement the emphasis this study has placed on spatial inequality in socio-economic development.

This study is a preliminary examination of regional inequalities upon which more specific and detailed work can be based. Although it has dealt largely with the results of the process of socio-economic development, it also considered some of the causal factors, the problems and the implications of the inequalities analysed. Subsequent research along the lines suggested above will provide further insights to the regional patterns of development investigated. Such research will also, it is here believed, verify the statement made in Chapter 7, namely, that a more equitable spatial distribution of the efforts at development and of the benefits thereof will be, in the long run, most desirable for the Tongan society, economy and polity.

APPENDICES

APPENDIX I: THE TONGAN ECONOMY
AND SOCIETY

This Appendix presents a brief introduction to the Tongan economy and society. This account is necessary since the level of living of the Tongan household cannot be fully appreciated without reference to the wider organisation within which and through which most economic and social behaviour is conducted.

I.i: THE PHYSICAL SETTING

Geographical situation

For the reader unfamiliar with the Kingdom of Tonga, the Group comprises about 150 islands scattered throughout some 20,000 square miles of ocean extending from latitudes 15°S to 23° 30'S and from longitudes 173°W to 175°W (Fig. 0.1). It is a small country, physically isolated from the main centres of world population and trade by thousands of miles of ocean.¹ The majority of the islands are very small in size and they range from those of only a few acres to Tongatapu, the largest island, with an area of 99 square miles. Many of the islands are uninhabited due to landform, lack of water, difficulty of landing, and small size. The estimated total land area is approximately 269 square miles and only 36 of the islands are inhabited (Table 0.1). Figure 0.2 shows the geographical positions of the various

1 See Benedict (ed.) (1967) for papers dealing with the problems of small territories, especially papers by Ward and Knox.

islands and island groups. A closer examination of this map will reveal small size and wide areal scatter to be outstanding physical features of the Group. It is here considered that these two factors have been, and are, significant factors responsible for regional variations in levels of living in Tonga.

Soils

Basically the soils of Tonga comprise two main types: one a clay soil (known locally as kelefatu), and the other a sandy soil (tou'one). The clay soil, which varies in texture from a loamy sand to a clay, is derived from weathered volcanic ash overlying a coral bedrock and is highly friable and generally drains fairly quickly. It covers most of Tongatapu, Vava'u and 'Eua, as well as many of the islands of Ha'apai, often to a depth of 10 feet and is of moderate to high fertility. The sandy soil, on the other hand, is derived, as the name implies, almost entirely from coral sand or marine alluvia, and hence is mostly confined to narrow strips along the coast. It is particularly widespread in the low coral islands of the Ha'apai group and is of low fertility.

Climate

Tonga has a warm, wet climate, with both rainfall and temperature increasing from Tongatapu in the south to the Niuas in the north. Table I.1 contains some basic climatic data for meteorological stations in the Kingdom.

Temperatures are fairly equable. The mean daily range throughout the group is about 10-15°F. Humidity is fairly high with mean daily relative humidity levels of about 80

Table I.1: Some Basic Climatic Data for
Tonga

Station	Latitude	Temperature (°F)		Mean	Mean Annual Rainfall (inches)
		Absolute Max.	Min.		
Niuafo'ou	15°34'S	92	67	80	117.0
Niuaatoputapu	15°57'S	92	61	80	94.8
Vava'u	18°39'S	91	54	78	85.9
Ha'apai	19°48'S	94	58	78	69.9
Tongatapu	21°08'S	90	51	74	67.0

Source: DP11, Table 1.1

per cent. The monthly mean of rainfall shows a somewhat regular seasonal pattern with December, January, February and March generally being the hottest and wettest months. The dry season is from April to November, with July and August being the coolest and driest months of the year. As the soils tend to dry out very quickly, a few months' drought can affect crop production adversely. Thus the drought conditions in 1957 and 1958 were partly responsible for the fall in copra and banana exports in 1958.¹ Fortunately, severe droughts are not a regular phenomenon in Tonga, and the climate is, on the whole, suitable for the healthy growth of most tropical crops. The prevailing winds are the south-east trades which blow steadily throughout the year. About three-quarters of the wind blows from this direction and helps to keep the temperature lower than it would otherwise be.

Tropical storms are not uncommon, some parts of the group being affected nearly every year. Although they bring moderately strong winds and heavy rains, they generally cause only minor destruction. Hurricanes, on the other hand, are less frequent. The likelihood of getting a hurricane in any one place is thought to occur once in every ten years, some places being of course more vulnerable than others. It is just as well that hurricanes do not strike within short periods of one another, for they are always very destructive to the Tongan economy. For example, the hurricane which swept through the Ha'apai and Vava'u groups in March 1961 was not only responsible for considerable structural damage but also caused a significant setback in copra production, and adversely affected the country's economy.²

¹ See Figures I.1 and I.2.

² See Figure I.1.

I.ii: THE ECONOMIC SETTING

An agricultural economy

The economy of Tonga is an almost entirely agricultural one, with the bulk of the people depending on a largely subsistence-based agriculture for their livelihood. In 1966, for example, about 70 per cent of the total male labour force were engaged in agriculture. Furthermore, of the Kingdom's total annual export value (f.o.b.), over 90 per cent is normally derived from agricultural exports. Indeed, the Kingdom's economy has a very narrow and precarious base, with the soil and, to a lesser extent, the surrounding seas and reefs being its only natural resources. Thus, in the absence of any important non-agricultural industry and in the unlikelihood of any significant industrial development in the near future, the heavy reliance by the vast majority of the people on agriculture will undoubtedly continue.

Aside from a few commercial plantations, agriculture in Tonga consists predominantly of subsistence farmers¹ producing from small-scale farms. Tax allotments² ('api tukuhau) average about 4-6 acres in Ha'apai and 7-8½ acres in the rest of the country. While the law of Tonga states that every male on reaching the age of 16 is entitled to a tax allotment of no more than 8½ acres, nearly 60 per cent of those so entitled have no land of their own. Notwithstanding

1 Strictly speaking, however, there are probably no pure subsistence farmers in Tonga. Nevertheless, in the context of this study a subsistence farmer is used, in a somewhat loose sense, to mean a farmer producing primarily for household consumption.

2 A tax allotment is an area of farm land which an individual owns or holds.

this, the relative ease with which land can be borrowed or 'rented' helps to ensure that every Tongan household can have access to some farm land.

In general, the type of village agriculture practised in Tonga requires no special skills which could not be easily acquired by any village cultivator. The standard farming implements are the bush knife (machete), the hoe, the axe, and the digging fork and spade. Animal power is never used in cultivation and the use of machinery is very limited. The chief staple food crops grown are yams, manioc, talo, kumala, giant talo, bananas and plantain. Of these, yams have traditionally been the most valued, though not necessarily the most significant in terms of acreage or quantity produced. Apart from coconuts and bananas, most of food crops grown in the household farm are intended primarily for household consumption, although any excess over family needs may be sold.

Exports and imports

Copra and bananas are the principal exports, and the bulk of the output is produced by the village subsistence cultivator. Watermelons, tomatoes, vanilla and pineapples are also grown as cash crops but on a much smaller scale than either bananas or coconuts. Copra and bananas normally make up over 90 per cent of value of the Kingdom's annual exports. Thus, the five-year annual averages of the export earnings from copra and bananas contributed over 90 per cent of the total export earnings during the period 1945-1964, and slightly less for the period 1965-1969. The statistics contained in Table I.2 demonstrate clearly the pre-eminent position of copra and bananas among exports, and summarise

Table I.2: Copra and Banana Exports - Five-
year Annual Averages of Quantities and
Values, 1945-69

Period	Quantity		Value (f.o.b.)		% of Total Export Value Contributed by Copra and Bananas
	Copra (tons)	Bananas (cases)	Copra (T\$'000)	Bananas	
1945-49	12,689	49,389	1,060 ¹	67	96.8
1950-54	15,850	71,439	2,338	138	96.3
1955-59	19,304	144,769	3,040	289	95.2
1960-64	12,607	141,136	1,907 ²	349	93.6
1965-69	9,972	384,672	1,904	1,129	89.5

1 Includes earnings from a small amount of coconuts, and likewise for the two following periods.

2 Includes earnings from coconuts and desiccated coconut which was first exported in 1962; the same applies to the corresponding 1965-69 value.

Sources: Based on Great Britain - Annual Reports on Tonga; Tonga Government - Annual Statements of Trade and Navigation; and DPII.

their performance over the last 25 years. The Table also shows that the average value of total exports for each of the five-year periods, 1960-1964 and 1965-1969, was less than that for 1955-1959, due in part to falls in both price and quantity of the main export, copra. In fact, bananas overtook copra as the leading export in 1967 and 1968, but this development was shortlived since banana production was drastically reduced in 1969 by an outbreak of diseases in the crop and by adverse weather.

Large fluctuations rather than a steady rise in agricultural productivity, at least as far as commercial production is concerned, have been the regular features of agricultural production in recent years. This is clearly illustrated in Figure I.1 and by the statistics contained in Table I.3. Neither of the two major agricultural exports shows any sustained or cumulative increase in total output over the last two decades. The Table also shows that lack of agricultural progress is even more apparent when agricultural export output is compared with population numbers (Table I.3).

While the average annual values of total exports have displayed a declining trend, those of imports have been characterised by steady increases. Values of imports and exports for the period 1948-1968, graphed in Figure I.2, reveal fluctuating rates of growth.¹ It can be seen that since 1961 Tonga has been running an adverse visible trade balance ranging from T\$99,000 in 1961 to T\$164,000 in 1967 and to T\$1,204,000 in 1968.

1 Export values would certainly show a declining trend if their real purchasing power were taken into account.

Table I.3: Per Capita Volume of Copra and
Banana Exports for Selected Years

Year	Copra (tons)	Bananas (Cases)
1948	0.33	0.91
1951	0.39	1.32
1956	0.31	3.25
1961	0.24	1.82
1966	0.12	5.88
1970	0.09	1.65

Sources: Based on Great Britain - Annual Reports on
Tonga; Government of Tonga - Annual
Statements of Trade and Navigation;
Annual Reports of the Justice Department;
Tupouniua (1958), Fiefia (1968); and
Files of the Copra and Produce Boards.

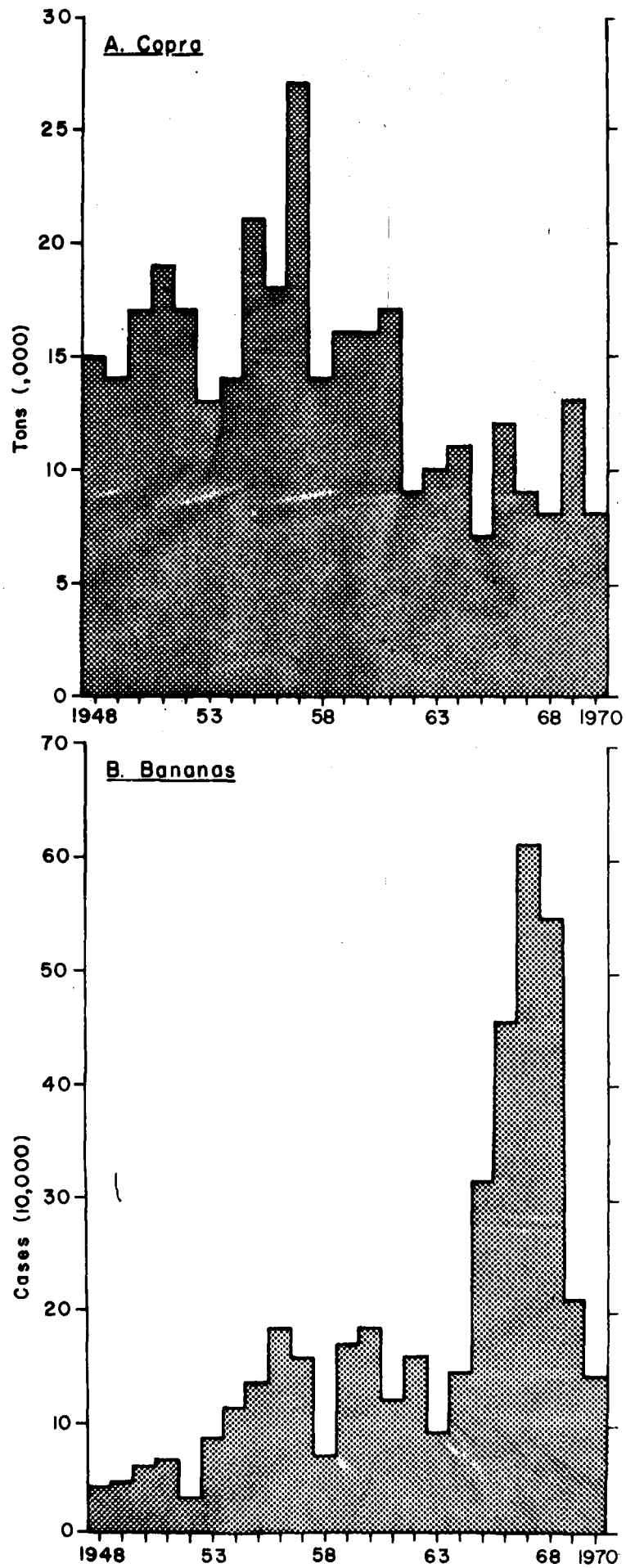


Figure I.1: Volume of Copra and
Banana Exports, 1948-70

Sources: Same as for Table I.2

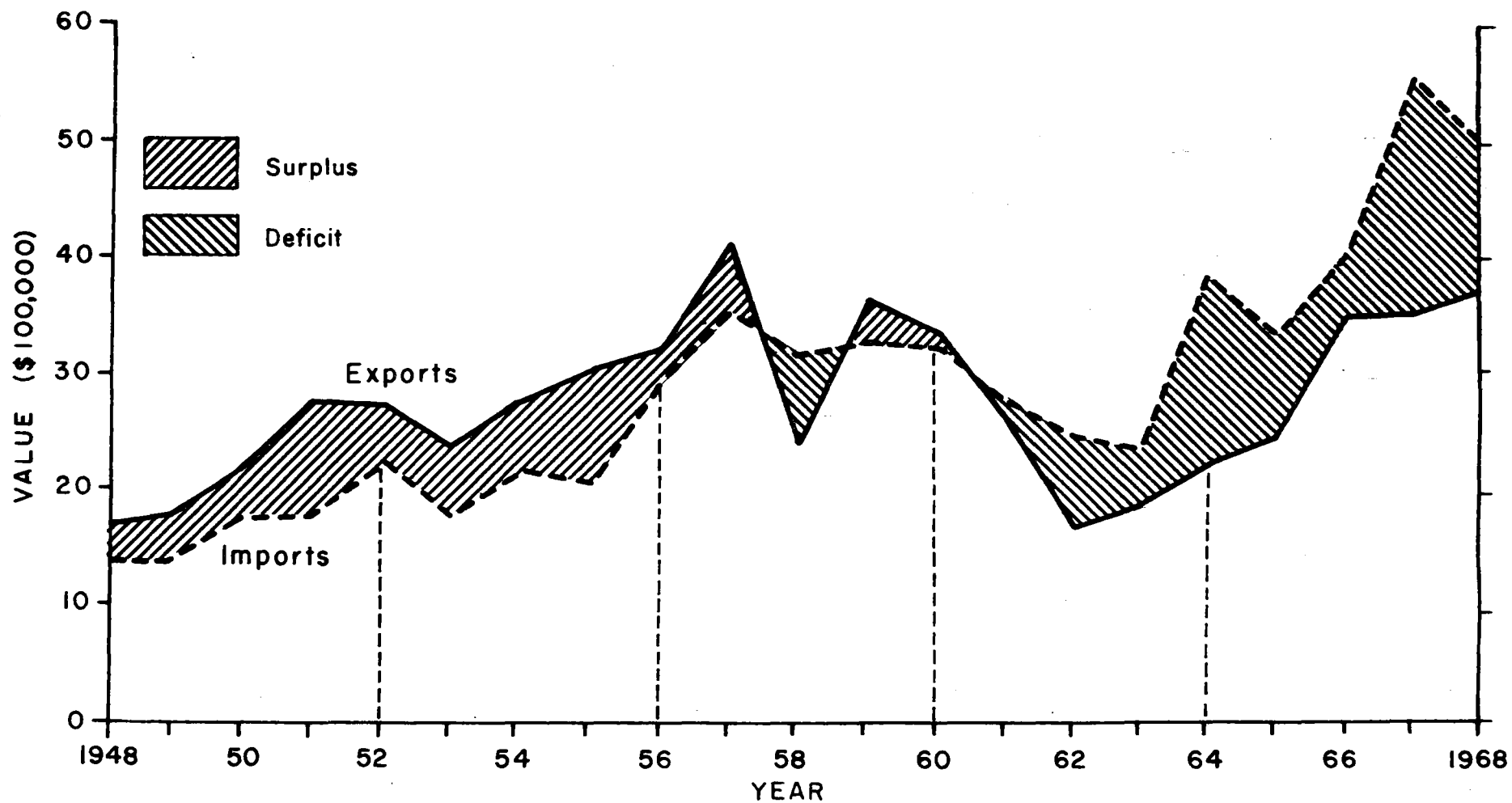


Figure I.2: Values of Imports and Exports, 1948-68

Sources: Same as for Table I.2

An examination of Table I.4 gives an idea of the composition of imports in recent years. The Table shows that in spite of the overwhelmingly agricultural basis of the economy, a surprisingly significant proportion, by value at least, of the total imports consisted of foodstuffs,¹ the bulk of which could have been produced locally. Although increases in the imports of foodstuffs may represent rises in levels of living or some aspects thereof, they also reflect the failure of the economy in general and of the agricultural and fishing sectors in particular to meet the increasing needs of the people. The degree of increased non-food imports is partly a reflection of the enlarged demands of the people created by their rising numbers and the expansion in their wants as they become more and more desirous of 'western' goods.

Fishing

As yet there is no significant organised fishery in Tonga. Fishermen are basically of the subsistence type; only a few can be classified as truly independent fishermen. Fishing usually takes place inside reef and lagoon areas or close to shore. Nets, traps, spears, fish fences, and hand lines are the common fishing equipment. Deep-sea fishing is rather limited. Off-shore whaling using harpoons is carried out by a few fishermen from about June to October. Fathom Fisheries Ltd, a private Australian-owned firm, which has been buying fish off Ha'apai fishermen for canning in

1 This is also a feature of most other Pacific territories. In 1968, for example, the proportion of the total value of imports that was made up by foodstuffs was 20 per cent in Fiji, 35 per cent in Western Samoa and 26 per cent in the Cook Islands (Fairbairn, 1971, 95).

Table I.4: Composition of Imports for Selected Years

	1959		1964		1968		1969	
	T\$'000 ¹	%	T\$'000	%	T\$'000	%	T\$'000	%
Flour	196	5.9	146	3.8	318	6.2	379	7.4
Fish	78	2.3	43	1.1	64	1.2	95	1.9
Meat	333	10.0	281	7.3	529	10.3	436	8.6
Sugar	73	2.2	93	2.4	116	2.3	135	2.7
Relief foodstuffs	-	-	15	0.4	32	0.6	41	0.8
Sub-total	680	20.4	578	15.0	1,059	20.6	1,086	21.4
Tobacco and alcohol	165	4.9	199	5.2	372	7.2	337	6.6
Drapery, textiles and footwear	399	12.0	334	8.7	434	8.4	443	8.7
Building materials	275	8.2	551	14.3	694	13.5	744	14.6
Vehicles, machinery, parts and fuel	390	11.7	380	9.9	653	12.7	625	12.3
Agricultural requisites ²	49	1.5	116	3.0	300	5.8	142	2.8
All other imports ³	1,380	41.3	1,696	44.0	1,638	31.8	1,711	33.6
Sub-total	2,658	79.6	3,276	85.1	4,091	79.4	4,002	78.6
TOTAL:	3,338	100.0	3,854	100.1	5,150	100.0	5,088	100.0

1 c.i.f. values.

2 Consists of agricultural machinery, insecticides, fertilizer, livestock feed, and shooks for packing export fruit, etc.

3 Includes boats and launches of which there were unusually high imports amounting in value to \$459,000 in 1959 and to \$547,000 in 1964.

Source: DPII, Tables A.8 and A.9.

Fiji and American Samoa, is now in the process of setting up a cannery in Tongatapu. The Government also operates a long line tuna fishing venture which, so far, has been a costly operation. The demand for fish far outstrips the local supply as is witnessed by the rapidity with which fishermen especially in Tongatapu sell their catches and by the amount of preserved fish imported.

Rapid population growth

The increasing trend in the level of imports has been paralleled by a rapid population growth. The total enumerated population of Tonga in 1966 was 77,429 persons which represented an increase of 36.2 per cent on the 1956 census figures, or an average annual increase of approximately 3.2 per cent compared with 2.9 per cent for the previous intercensal period, 1939-1956. Between 1956 and 1962 the annual rate of increase fluctuated between 2.6 and 3.0 per cent but since then a steady rise was noticeable, reaching an estimated 3.6 per cent in 1966 and 3.5 per cent in 1969. These increases in recent years occurred in spite of a birth control campaign conducted by the Health Department. The attitudes¹ favouring a high birth rate in Tongan society have so far shown little indication of change, and hence the comparatively recent upsurge in Tonga's population growth may not revert to more modest proportions in the near future. The situation is, and in all likelihood will be, made more

1 Such as the desire to have a moderately large family, the reliance on other members of the extended family to help with child-raising and other household chores, the reluctance to venture into a birth control programme, and so on.

serious by the fact that about one half of the population is under 16 years and 34 per cent of both sexes are in the reproductive age-groups, strongly suggesting every possibility that the current rate of increase will be maintained, if not exceeded, in the current intercensal period.

Since much of the land is already being occupied and some locked up in hereditary estates,¹ a landless class is growing. In 1966 there were only 415 adult males per 1,000 males with 'api tukuha; that is 59 per cent of all adult males in the total population were landless. About 20 per cent of all landless adult males were enumerated in Nuku'alofa, suggesting perhaps that many males, particularly in the younger age-groups, migrate to this urban area in search of employment.

Employment opportunities

With no apparent possibility of a significant level of emigration to overseas countries, one of the most pressing problems confronting Tonga is the creation of sufficient non-agricultural employment opportunities, or intensive agricultural employment, for its rapidly growing labour force. But, since the usual preconditions² of substantial industrial development are sadly lacking in Tonga, there is no immediate prospect of absorbing into non-agricultural employment more than a small proportion of the swelling labour force. Only about 1,259 non-agricultural jobs were created during the ten-year intercensal period, 1956-1966

1 At the end of 1971, 30 per cent of the total land area of Tonga was still being held in hereditary estates (Report of the Department of Lands and Survey for 1971, Appendix II).

2 Such as minerals, power resources, capital, skilled labour, and a relatively large market with a high purchasing power.

(Fig. 1.3), against a corresponding increase in the labour force of the order of over 9,000, and the proportion of the employment in the non-agricultural sector decreased from 27.8 per cent in 1956 to 24.8 per cent in 1966. This state of affairs is a clear reflection of the seriousness of the employment situation. As a matter of fact, 9,000 is a conservative estimate since a fair proportion of those who stated their occupation as agriculture and of the 'unclassified' (3,066 in 1956 and 1,808 in 1966) would be more appropriately classified as unemployed or "without regular or specified occupation" (Rogers, 1969, 216). Further, the 1966 Census Report estimated that between 1966 and 1976 about 11,142 persons would be entering the work force while the maximum number of persons who would retire from active employment would only be about 1,444.

Of the intercensal increase in non-agricultural jobs, the greater proportion was due to expansion in the government services and to the efforts of the government-sponsored Copra Board in developing new and existing industries. As already noted, Government is the largest employer and the only significant source of capital in Tonga. Its vital role in the field of economic development is aptly summed up in the 1970-75 Development Plan:

The private sector in Tonga is very inhibited by a lack of access to capital and by a shortage of entrepreneurial ability which prevents it from playing an active role in the development process. The Government has no option therefore but to lead economic growth by a policy of public spending on development. It is to be hoped that during the 1970-75 plan period the Government will be able to continue to stimulate economic growth in this way, while at the same time the private sector will develop so as to be able to participate more fully in the country's development.

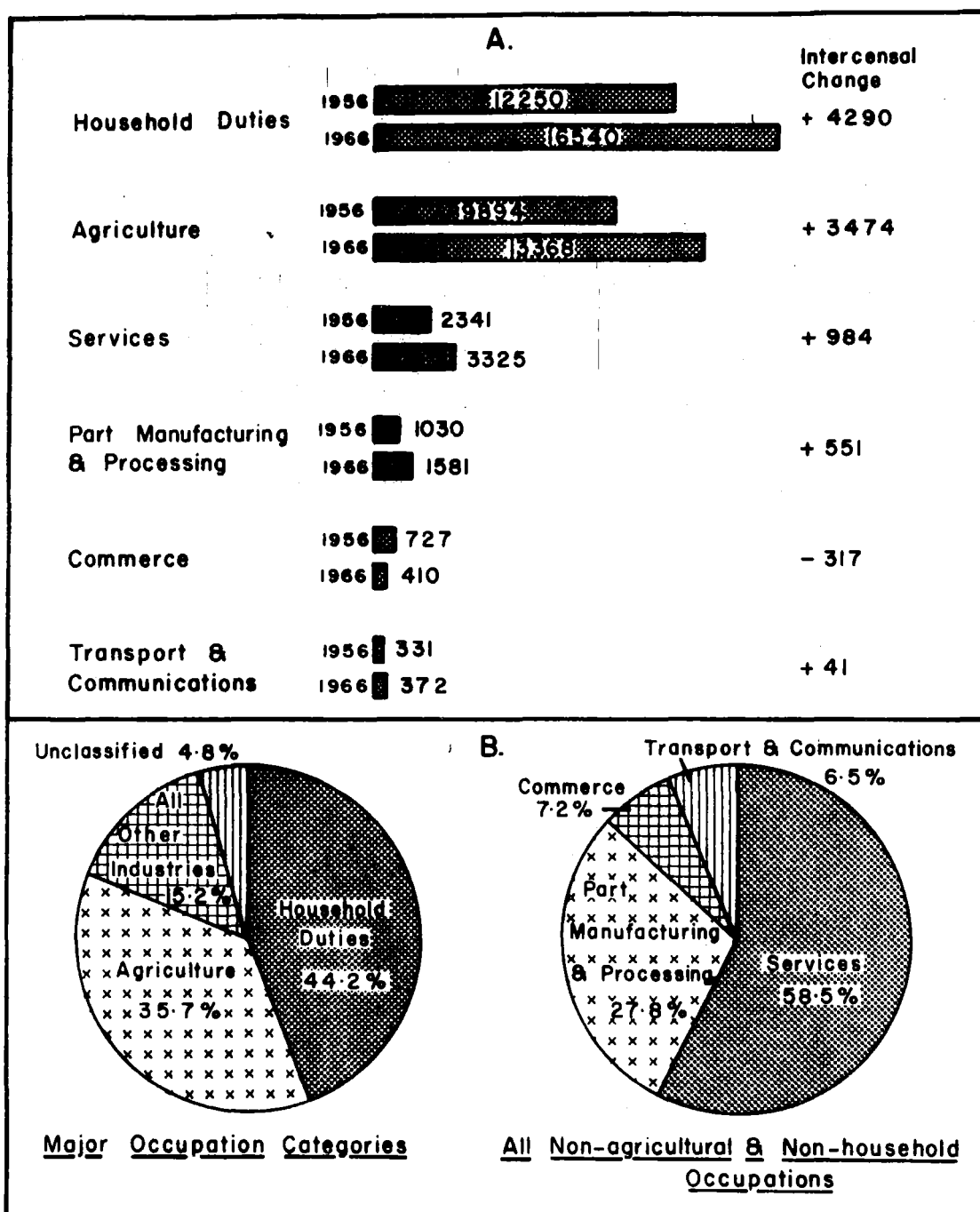


Figure I.3: Distribution of Economically active Population by Major Occupations, 1956 and 1966; A- 1956, 1966; B - 1966

Sources: Based on Tupouniua (1958), Fiefia (1968)

I.iii: THE SOCIAL SETTING

The household

The basic social and economic unit in Tonga is not, and was not, the individual but the household which, as has already been defined, consists of a group of people living, eating and largely working together. The average household size is 6 to 7 persons. The household is normally composed of a single nuclear family consisting of a husband and wife and, if any, their children. In other types of households the members are almost invariably of the same kinship group (kainga) or affines related by marriage. Thus the Tongan household is "fundamentally a kinship group.... though sometimes including persons unrelated to the rest of the group" (Maude, 1965, 49). The head is traditionally the father or the most senior male member, and descent is normally reckoned patrilineally, as is inheritance of land. Customarily the household head directs most of the affairs of the household both internally and externally, and this is the reason why the household head was decided upon as the person to be approached for questioning and discussion in the course of the field-survey.

The reference above to the household as being the primary economic unit means that the economic activities connected with earning a livelihood are predominantly the business of the household members. Put another way, the 'business firm' is invariably the single household providing in most cases all the necessary labour. The division of labour by sex is characteristic and well-defined. Men dominate subsistence activities such as farming, fishing and construction tasks. The only plantation work that

women often engage in is the planting of the mulberry paper and pandanas trees; and, although they often fish in the lagoon or gather shell-fish on the reef, their contribution towards subsistence production is relatively small. They have the main responsibility for the care of the infants, the daily cooking, household chores, the washing, the weaving of mats and making of tapa-cloth. In this way household members pool together their labour and share the fruits of their joint efforts. A deviation from this communal pooling of services and communal sharing of their rewards was, however, observed by the present writer to be relatively strong in households in which wage-earning, and, to a lesser extent, cash cropping are important. Wage-earning as a means of livelihood entails a change in the customary division of household labour and, what appears to be a consequence of this change, a weakening of the force of traditional co-operation among the household members.¹

One of the significant features of the Tongan society is the fact that it is strongly kinship-oriented. Thus, although the household consisting of individuals bound by kinship ties is the basic unit of everyday living, the extended family which consists of varying numbers of kinship households and known locally as the famili or matakali also constitutes a socio-economic unit of considerable importance. Among themselves the members of the extended family form a unit of co-operation in activities requiring a lot of labour such as certain farming activities and house construction, but

1 Similar conclusions were arrived at by Finney (1965, 321) in his study of socio-economic change in French Polynesia, and by O'Loughlin (1956, 66) in her study of the Fiji economy.

especially on occasions such as marriages, funerals, birthday celebrations and other festive occasions. Each of the various members has his position in relation to others and his obligations to, and expectations from, others are governed to an important degree by the kinship bonds that exist between the parties concerned. These personal inter-relationships, obligations and expectations are indeed important components of the social fabric within which the Tongan household operates. These social obligations can be, and often are, of great help to those in real need, providing them with some security. Thus a man with no land of his own can always borrow (kole) property from his relatives or friends who do have land. But there is also the negative side to these obligations. As Maude (1971, 123) has written,

relatives and friends may request a load of coconuts, a few baskets of tubers, or cash, and consequently men trying to increase production find their efforts hampered ... marriages and funerals also involve obligations of kinship and friendship ... individual land tenure in Tonga has not produced fully independent farmers, for social obligations still restrict the individual's control over his land, his time and his produce.

However, Maude (1971, 123) also noted that

such obligations continue to be honoured partly because of tradition, sentiment and the prestige gained by the giver, but also because they still fulfill their essential function of ensuring the security of the individual and his family.

The village

In Tonga, as in most other Pacific countries, the principal form of settlement is the village. There are altogether 145 villages in which roughly 60 to 70 per cent of the population live. The villages vary greatly in size

from 47 persons in Lape¹ (Vava'u), to well over 1,000 persons in the larger villages such as Kolonga and Vaini (Tongatapu), and Leimatu'a (Vava'u).

Although the villages are situated in different kinds of locations, only a dozen of them are more than half a mile from the sea; there is also little difference, apart from size, in their appearance. Dwelling and adjacent cooking houses and other outbuildings of various kinds are scattered about the village with few sites being fenced off. As a rule, each village has at least one church, a reflection of the significant place that religion occupies in Tongan society. Most of the villages have, in addition, school houses and one or more small retail stores.

Apart from being a residential unit, the village is also a social, administrative and, still to an important degree, an economic unit. As such it is bound together by a number of unifying forces. It has already been noted above, for example, that there are kinship ties existing among several households through membership of one of the famili of the settlement. And in many of the villages the majority of the households can be traced back to only a few common ancestors.

Corresponding to the two types of authority over land²

1 That is, in 1966.

2 Authority over land is of two types: (a) Government estates - lands which are administered and granted by the Government; and (b) noble or hereditary estates - lands which are owned and administered by members of the Royal family, nopele and matapule. They are called hereditary estates because the titles to them are handed down through inheritance. In the context of this study, noble villages refer to all villages on hereditary estates.

in Tonga are two types of villages - noble and government villages. In the noble village the traditional status and authority of the noble, the chief of the village, constitute a strong force, binding the members of the village together in common allegiance to him. The noble "is recognised as having the authority to call upon every household in the village to supply gifts of yams, pigs, mats tapa-cloth and other goods, whenever the need arises for such accumulations to be made, such as the marriage or death of a member of Royalty or of the nobility" (Nayacakalou, 1959, 100). Although not bound by law, the villagers display great respect to the noble, listen to and carry out his demands partly in recognition of his traditional position as the village leader, and partly due to the fact that the estate from which individual land allotments are distributed to the villagers is his hereditary tofi'a.¹ It is in this control of land distribution that the noble exerts his most powerful influence on the villagers, especially those who are seeking land allotments from him. Contrary to the land law which states that every Tongan male on reaching the age of sixteen years is entitled to a tax allotment of no more than 8½ acres, land distribution is, in practice, the sole prerogative of the owning noble or the Minister of Lands if it is government land. However, once a piece of land has been granted by the noble or Government and subsequently registered by the landholder in his own name, the estate holder no longer has any authority over it,² unless the

1 Not all of such villagers, however, do have land from their noble's estate.

2 Provided, of course, that the landholder complies with the conditions of tenure laid down in the Land Act.

landholder dies leaving no lawful heir to inherit the land which then reverts to the control of the noble.¹

There is also the village officer ('ofisa kolo), now elected but formerly appointed, who acts as the government representative in the village. In government villages the 'ofisa kolo is recognised as the head man, even though he does not command very much by way of authority or status other than that directly related to his specified duties. His main responsibility is to convey the wishes of the Government and/or the noble to the villagers which he does by calling village meetings (fono). Unlike the Samoan village fono which is the highest authority in a Samoan village, is responsible for the social and economic welfare of the villagers and which has wide powers to enforce its wishes on all villagers, the Tongan fono is only a gathering of all adult villagers to hear the wishes or orders of the Government and/or noble. Only rarely are discussions held in these meetings.

Finally, there are ties of local association and cooperation in various social and economic activities created by common residence or common religion or kinship. These include communal attendance at, and material contributions to, funerals and weddings, communal efforts at road construction, school and church building. Also to be found within most villages are various co-operatives and joint working groups, such as men's working groups (kautaha toungaue, kautaha toutu'u), and women's working groups (kautaha lalanga, kautaha koka'anga).

1 For a fuller discussion of the conditions of land acquisition, see Nayacakalou (1959), and Maude (1965).

Social stratification and the political system

Not unlike Tonga of the past, Tonga today is a highly stratified society, with many different kinds of rights, privileges and duties attached to each and every stratum. Broadly, there are three main social strata, which may also be regarded as economic strata, for there is a close relationship between social standing and wealth.

At the apex of the Tongan society stands the Royal Family, with the King as the head of Government, head of the chiefs and head of the people. In short, he is the supreme head of all Tonga. To him and his family the Tongans have traditionally accorded the highest form of respect and honour. Indeed, "the wishes of the Royal Family are far more binding on Tongans than the law of the land" (Kavaliku, 1966, 7). In addition, all the lands of Tonga are ultimately the property of the King.

Next to the Royal Family on the social ladder are the nobles (nopele), men of chiefly status, and their immediate families. Altogether there are 33 noble titles, although there are now only 29 nobles. Their significance in Tongan society lies, as has been pointed out, in the fact that they 'own' hereditary estates, that they are the traditional leaders, and that they have a number of exclusive rights and privileges. Of a noble's authority, Spillius (1959, 7) wrote: "the noble's authority extends over the whole village, and is especially evident in ceremony, land, food and the prestige of the village". There are also 6 lesser chiefs (matapule) who may be subsumed in the nobility class as they not only belong to the landed aristocracy but also share in some of the rights and privileges of that group.

At the bottom of the social ladder are the commoners (ha'a me'a vale or tu'a) who comprise roughly 99 per cent of the population. The commoners are the 'doers' while the Royal Family and the aristocracy are the 'masters' or 'leaders' (Latukeyu, 1966, 29).¹ Of their place in society, the commoners are constantly reminded in such cultural forms as language and dress, ceremony and obligations of various kinds. As such the system of social stratification determines to an important degree the socio-economic behaviour of the average Tongan household. The significance of the system, and its attendant ramifications, in terms of socio-economic development, has been stressed by Walsh (1967b, 121) when he wrote that

it prevents social mobility and the emergence of new leaders, engenders a sense of fatalism and passivity in the commoner, and leaves traditionally-orientated leaders or government as the only possible innovators. Thus the people most able to bring about social change which may lead to the mobilisation of Tonga's most important resources - its land and its people - are precisely the ones least likely to bring this into effect.

Like many other facets of Tongan society, the present day political set-up is a Western constitutional organisation modelled on the English system but superimposed on the traditional Tongan complex of authority and rank (Walsh, 1967b, 121). It consists of a constitutional monarchy and a system of parliamentary government. Essentially this system comprises in an ascending order of importance, the Parliament or Legislative Assembly, the Cabinet, the Privy Council and the Sovereign.

1 This is a continuation, though in a much modified nature, of the former relationship between the commoners and their superiors in which the commoners "were completely under the domination of their superiors and served them in every way" (Latukeyu, 1966, 29).

The Parliament is composed of the Premier, Crown Ministers, Governors of Ha'apai and Vava'u, 7 representatives of the nobles and 7 representatives of the people. Making up the Cabinet are the Premier, who presides over it, Crown Ministers and the Governors of Vava'u and Ha'apai. The Privy Council consists of the members of Cabinet with the addition of the King as its chairman. With the exception of the Governor of Vava'u, all the present members of the Privy Council are related either by birth or by marriage to the Royalty and the nobility. They are also all personal appointments of the Sovereign, an expression of the latter's supreme position at the apex of a concentrated nucleus of power. Indeed, the power of the monarch is almost absolute, for he can "at any time he deems it necessary convoke the Legislative Assembly" (Kavaliku, 1966, 89). Before any bill passed by the Legislative Assembly could become law, the royal signature is required, and the Sovereign retains the power to veto.¹ Walsh (1967b, 121) has aptly described the Tongan political system as "Western in its legal form, Tongan in its benevolent but autocratic practice".

From the above outline of the political organisation, it is more than apparent that the leadership in Tonga is concentrated in the hands of a few people and is solidly based on the traditional fabric of rank and authority. That this particular concentration of power has an important

1 Haast (1970, 110) has noted that "the decision of the reigning monarch, King Taufa'ahau IV, to annul the marriage of his niece to a commoner in late 1969, graphically illustrated the absolute authority of royalty and the gulf between social classes in the highly stratified Kingdom".

bearing on the levels of living of the people there is no doubt; but the exact nature and extent of such an influence is far from clear. However, the views expressed by some of the writers on Tongan affairs do provide some insight into this question. In discussing the question of leadership in relation to economic development, Walsh (1967b, 121) argued, for example, that the "failure to develop more fully Tonga's resources base can be traced to weaknesses in government leadership which exclude the people from a sense of participation in the economy. The people themselves are capable of greater economic activity and of adopting new methods if given clear incentive in the form of a definite market and if there is leadership and assistance from above".

Walsh then went on to cite a number of examples to support his statement. Jeuda¹ (1971, 26) wrote in similar vein when he suggested that one of the main constraints which operate against the Tongan Government being able to take effective action to solve many of the economic and social problems confronting the country is that

there is no political will or ability to institute change because there is no 'government' as we in the developed countries understand it; rather it takes the form of our civil service. The Cabinet Ministers, who head up the various government departments, are personal appointments of the king; several of them are nobles and the Prime Minister is the king's brother ... As there is no doctrine of Cabinet collective responsibility and as many of the people's representatives have strong links with the nobility, any measures put forward by government, designed to reform the system of land usage and to develop a fairer tax structure, are unlikely to be passed.

1 Jeuda was member of a British team of experts commissioned by the Tongan Government in 1970 to investigate the operation of the Copra and Produce Boards, largely with a view to improving their efficiency and prevent further financial mismanagement such as those mentioned in Chapter 4.

The Church

The Christian religion in its various forms has made a deep and permanent impact upon the Tongans, and is in fact an extremely important institution in Tongan society. There are five principal denominations: the Free Wesleyan Church of Tonga (FWCT), the Free Church of Tonga (FCT), The Church of Tonga (CT), the Roman Catholic Church (RC) and the Church of the Latter Day Saints (LDS) commonly known as Mamonga ('Mormon'). Three of these denominations, FWCT, FCT, CT, are basically and historically Wesleyan, and accounted in 1966 for 73 per cent of the Kingdom's population, but each has its own separate organisation, administration and leaders. The RC accounted for 16 per cent of the total 1966 population, and the LDS made up 7 per cent, leaving only 4 per cent or 2,903 persons in other or no other churches (Fiefia, 1968, 23). Though there is officially no national or state church, the FWCT, the king's and nobles' church, is in practice so regarded. All denominations are based in Nuku'alofa.

Church activities and ceremonies such as Sunday School, services, choir, committees of various kinds and drives for church funds play a prominent role in the lives of the Tongans. A local informant was not exaggerating when he remarked that "the support of the church and its affairs is a public duty, for the church is the most important institution in the whole of Tonga". It is not surprising, therefore, to find the Tongans as extremely good donors to the annual misinale (fund-collections), often donating as much as one-quarter or more of their cash incomes to the church. On Sundays there are the fakaafe (church feasts)

which are costly affairs by any standard. On average a fakaafe costs a household no less than about \$40 in both cash and kind. Unfortunately, however, the strong co-operative and competitive spirit and energetic drive shown by Tongans in church activities do not always extend to their other activities, particularly those connected with attempts to better their living conditions.

The importance of religion is further evidenced by the high regard in which church ministers are held in Tongan society. These ministers are, according to Kavaliku (1966, 72), "second only in influence to the Royalty and the nobility. Their education and training and the religious fervour of the people have allowed them to be influential men, not only in religious matters but also in economic, social, educational and political affairs". The various religions also have an important effect in shaping the outlook of the people. Thus, the members of the FWCT are generally more conservative in attitude than those of the RC and LDS churches who have had greater contact with Europeans.

In the field of education, the various churches play a very important part. They are, for instance, responsible for 90 per cent of all post-primary education and about 30 per cent of primary education, a responsibility which they carry out with no financial assistance from the Government (DPII, 12). Finally, the churches, especially the LDS, are important suppliers of overseas funds. It has been estimated,¹ for example, that during the past 5 to 10 years about

1 By a government official who did not wish to be identified.

20 to 30 per cent of government annual revenue has been derived from the LDS through taxes on imports,¹ incomes and so on.

Social and economic attitudes

It is generally the case that the level of socio-economic development a country enjoys is determined to an important degree by such factors as the ratio of natural resources to population and effective contacts with the outside markets. It is as equally true, that within the limits imposed by those factors, socio-economic progress also depends on the attitudes of the people. Socio-economic development "cannot be imposed, but must emerge out of what the people want and do, both individually and collectively" (Belshaw and Stace, 1955, 12). They must desire the benefits of development sufficiently to make the necessary sacrifices, acquire the required knowledge and skill, establish and employ the appropriate organisations or institutions. As Myrdal (1968, 1873) has argued, if attitudes and institutions conducive to progress are not developed, emphasis on improving levels of living is bound to meet frustration.

From the evidence which is presented in this study, it is quite apparent that the great majority of Tongans do aspire to higher levels of socio-economic development. It is also emphasised that, in general, certain of the major factors of production - land, labour and capital - are quite adequate to permit considerably higher levels of living to be attained.

1 The second Development Plan has noted (DP II, 16) that increased imports of construction materials over the past decade reflect the impact of the first Plan "together with a high level of building activity in the Mission sector".

But in spite of their aspirations for higher levels of living, the people generally fail to make fuller use of the resources and opportunities available. Thus, coconut plantations are often not properly looked after by keeping them free of weeds, replacing the aged palms and taking the necessary steps to eradicate rhinoceros beetles. Again, advice and assistance with fertilizer and spraying chemicals which are supplied by the Agriculture Department and the Produce Board in attempts to control bunchy top and streak leaf disease which affect bananas are not taken advantage of by the majority of growers. Many growers appear to regard pests and diseases which affect their crops in a rather fatalistic manner.

Why, then, it may be asked, do the people not utilise their resources more fully in attempting to fulfil their aspirations? The answers are many and complex, and space does not permit more than an outline of some of the major reasons.

Evidence gathered suggests that the desires of the Tongans for improved levels of living are not sufficiently strong enough to elicit the required efforts. Living as they do in a situation of relative 'primitive affluence', it is perhaps understandable that there is no sense of urgency in their efforts to improve their living conditions. Attempts are made to realise those desires, but more often than not the efforts fail to reach the necessary level.

The relative lack of 'the effort to economize'¹ on the part of the Tongans must also be considered in terms of their past experiences and future prospects. As Lopreato (1967, 253) has argued, "people will expend efforts and energy in the pursuit of a given goal when there is at least some

1 See Chapter 7.4 for the definition of this concept.

expectation of success".¹ Given, therefore, a history characterised by insufficiently rewarded efforts,² and a traditionally strong sense of fatalism and passivity, the Tongans' relative lack of determined efforts to 'develop' is understandable.

The failure to achieve higher levels of living should also be considered in relation to the anga-faka-tonga (the Tongan way of life) which often hampers developmental efforts. Thus, a man may expend most of the money he might have been saving for a house or agricultural tools on occasions such as funerals and weddings. On such occasions, the Tongan is still prone to expenditure on a scale which is lavish in relation to income. He may believe that he should not spend so much on such occasions, but at the same time, he feels that the anga-faka-tonga demands it of him to do so. Again, it will be against the anga-faka-tonga to refuse a request for, say, money from a relative, even though the owner can ill-afford to part with the money. That is, there is a conflict between the new material wants and the non-material satisfactions provided by the traditional way of life which has instilled in the people attitudes and values which are difficult to reconcile with the demands of greater material well-being.

There is also the question of prestige and status. Thus, large donations to the Church or some public fund-collections are often made at the expense of greater material

1 Spate (1959, 9) has also argued that "the allergy to fixed routine working ... can only be overcome by giving adequate returns to the most energetic".

2 See Chapter 4.4 - 4.5.

well-being, due largely, the author believes, to the prestige and status such contributions bring to the donor. All these are part and parcel of the anga-faka-tonga which determines to an important degree the boundaries within which the Tongan acts in his quest for socio-economic development. There are, of course, some who have decided to opt out of many of the demands of the anga-faka-tonga. They, however, still form a very small minority.

APPENDIX II: METHOD AND SCOPE
OF DATA COLLECTION

This Appendix is a continuation and elaboration rather than a repetition of the outline of the method and scope of the study given in Chapter 2. The more detailed account it presents is important for two reasons. In the first instance, it allows the reader to make an informed assessment of the probable reliability and limitation of the material included than would otherwise be possible. Secondly, it may be of interest to fellow-workers in the Pacific in general and in Tonga in particular.

II.i: SAMPLING PROCEDURE

Areal stratification

As stated in Chapter 2, the regional surveys were based on stratified samples of households covering the whole of each region. Although no entirely satisfactory sampling frame existed, it was possible to proceed using the 1966 Population Census as the basis for stratifying the Tongan household population into subregions.¹ Although one objective of this stratification was to ensure proper areal coverage of each region, the main consideration taken into account in the actual stratification process was the need to derive, as far as available evidence permitted, relatively

1 Although population increases and movements have occurred since the time of the Census, it is believed that these would not have altered significantly the geographical distributions of households. The villages and the household populations of the various subregions are set out in Appendix III.

homogeneous socio-economic subregions. The incorporation of this condition into the stratification procedure was made primarily to increase the representativeness of each regional sample and the precision of the results derived therefrom.¹

As there was very little relevant information available on the study regions, the stratification and selection process had to be based on the author's knowledge of the regions and on information collected from local informed sources. The socio-economic factors that were taken into account in the subdivision process included the following: the extent to which goods and services were available or within easy reach; the degree to which facilities or opportunities for paid employment were within ready access; and the availability of transport and communication facilities, particularly to and from the main town or centre of each region. The derived subregions are shown in Figure 2.2.

Sample Size

The number of households to be surveyed was determined largely by the availability of research resources. At the same time, however, every effort was made to ensure that the samples were large enough to allow one to make generalisations that would be statistically sound about the populations under investigation. Altogether, a total of 267 households were selected and surveyed. The regional distribution of these households was 151 in Tongatapu, 49 in Ha'apai and 67 in Vava'u (Table II.1). In terms of sampling fractions,

1 The total variation regarding any variable or attribute in a population may be regarded as consisting of two elements, variation between strata and variation within strata. But, in stratified random sampling, variation between strata does not enter into the standard error at all (Moser, 1958, 78-80; Yates, 1965, 24).

Table II.1: Sample Stratification and
Response Rate

Region Sub- region	No. House- holds (1966) (i)	No. in Intended Sample (ii)	Total No. Drawn (iii)	No. in Final Sample (iv)	Response Rate (%) (v) ¹
<u>Tongatapu:</u>					
Far Eastern (I)	1,225	26	27	26	96.3
Mid-Eastern (II)	1,120	28	29	28	96.6
Central (III)	913	22	24	22	91.7
Western (IV)	1,092	25	25	25	100.0
Urban (V)	2,006	50	60	50	83.3
All Tongatapu:	6,356	151	165	151	91.5
<u>Ha'apai:</u>					
Larger Islands (VI)	1,053	32	37	32	86.5
Smaller Islands (VII)	551	17	27	17	63.0
All Ha'apai:	1,604	49	64	49	76.6
<u>Vava'u:</u>					
Eastern (VIII)	1,036	31	38	31	81.6
Western (IX)	587	18	22	18	81.8
Islands (X)	465	18	26	18	69.2
All Vava'u	2,088	67	86	67	77.9

$$1 \quad (v) = \frac{(iv) \times 100}{(iii)}$$

Sources: Fiefia (1968); Field-surveys, 1970-71.

these represented 2.5 per cent of all the households in each of the subregions in Tongatapu, 3 per cent for the 2 in Ha'apai and 2 of the Vava'u subregions, and 4 per cent for the third and smallest (numerically) Vava'u subregion. The higher sampling fractions for the Ha'apai and Vava'u subregions were made necessary by the need to ensure that the samples would be large enough to allow generalisations about the populations surveyed. Thus, the smaller the subregion the higher was the sampling fraction chosen.

Selection of households

Having decided on the sample size, the next step was to determine a method of selecting the required number of households to be studied. Since the relevant information contained in the Report on the Results of the 1966 Population Census had been analysed according to villages, and since each village had an 'ofisa kolo' from whom a list of households could be readily obtained,¹ it was decided to employ the villages as the sampling units from which the households or recording units would be selected. The number of households to be sampled from each selected village was determined in the following manner: (a) 6 from selected villages which contained 200 or more households (that is, at the time of the 1966 Census); (b) 4 from selected villages containing 100 or more households but less than 200; and (c) 3 from all others selected, except the last selected one from which anything from 1 to 6, depending on the size of the village and on the number of households remaining to be selected, might be drawn

1 The position and responsibilities of the 'ofisa kolo' have been outlined in Appendix I.iii.

to make up the required number.

The villages from which households were to be sampled were drawn at random, and after each draw the appropriate number of households was chosen until the required sample size was obtained. The towns of Nuku'alofa and Neiafu were far too large in terms of household numbers for complete and accurate household lists to be easily compiled. Areal sampling was, therefore, employed for selecting households from those two areas.¹

Once a village was chosen, the 'ofisa kolo of that village was contacted and asked to supply a list of all Tongan households in his village. The appropriate number of households to be interviewed was then drawn at random, by means of a table of random numbers, from this list. When, for any reason, a household drawn could not be included in the survey, a replacement was made by a further random drawing from the same list.

It may be argued that by selecting only 6 households from each of the numerically larger chosen villages but only half as many from each of the smaller ones, one may be biasing one's results towards the smaller villages. But since available evidence suggested that in Tonga, with the possible exception of Nuku'alofa, there was no systematic relationship between village size and socio-economic variables, the selection method followed should not distort the results. It may not be inappropriate also to point out that, aside from the three village case-studies, the survey did not attempt to examine inter-village differences. Rather, it aimed at investigating inter-regional variations, and the village was, for reasons

1 This was done by means of a grid overlay on the map of each town.

already outlined, just a convenient collection unit.

Response rate

Although all those contacted were willing to co-operate not all of those initially drawn for the samples could be included in the survey. There were several reasons for this. In some cases, those sampled had either died or had left the village. In others, the list supplied by the 'ofisa kolo turned out to be inaccurate in that it included a person or persons not always resident(s) in that village. The number of such cases were, however, fairly small. In yet other cases, particularly in the smaller, more remote outlying islands, transport difficulties made it necessary that if a person to be interviewed was absent from the village at the time the interviewer called, a replacement had to be drawn. In the case of Nuku'alofa and Neiafu, where areal sampling was used, a number of the originally-chosen sites were not household dwelling sites, and, therefore, further random drawing had to be carried out.

A breakdown of the regional samples and of corresponding response rates is given in Table II.1. The Table shows that overall there was a relatively high rate of response, indicating that there was little risk of selection bias. At the subregional level, on the other hand, selection bias might be important in the Smaller Islands subregion of Ha'apai and in the Islands subregion of Vava'u, each of which registered a response rate of less than 70 per cent. In these 2 subregions, fishing was a comparatively important occupation and it is felt that those who spent a good proportion of their time in fishing might have been under-represented by their being replaced in the sample because of their absence

at the time of the interviewer's visit. Because of unfavourable weather the villages of Kotu and Tungua, in the Ha'apai group, which were originally included in the sample villages had to be replaced. The replacements were the villages of 'O'ua and Fonoifua (Fig. 0.4).

Sources of errors in the survey results

As almost every survey is subject to errors of one type or another (Ferber and Verdoon, 1962, 259), it is necessary that some assessment be made of the reliability of the information collected. In connection with this survey there are three sources of errors or bias that need to be discussed: (a) selection bias; (b) sampling bias; and (c) measurement bias.

(a) Selection bias

This type of bias occurs when a faulty selection method is followed, such as deliberate selection of a representative sample. The simplest and most certain way of avoiding this type of bias is to draw the sample either entirely at random or at random subject to restrictions (Yates, 1965, 10). A method of random selection was, therefore, employed in drawing the household samples, subject of course to stratification.

A second source of selection bias that is common in surveys of this nature is that due to substitution or replacement when some of the originally chosen survey units have, for one reason or another, to be replaced. It has already been shown, however, that there was a high response rate indicating that there was little risk of significant selection bias.

(b) Sampling bias

Sampling bias is that which is due to the variability in

the population or the universe under study. Its magnitude varies proportionately with the degree of variability in the population and inversely with the absolute size of the sample drawn. The stratification process described above was designed, in part, to minimize the sampling error due to variability in the characteristics of interest. Although available research resources were the main determinant of the sizes of the samples, each of the final regional samples was considered large enough to allow one to generalise about the population from the survey results.

(c) Measurement bias

The third type of bias that needs to be discussed here is measurement bias which results from the interviewee giving inaccurate answers and/or from the interviewer incorrectly measuring or recording the relevant information. In order to reduce this kind of bias to a minimum, every effort was made, as far as possible, to detect any instances of incorrect information being given by the informants and to avoid incorrect recording by the interviewer. Some instances of the former source of error were identified, but these were too few in number to have any significant bearing on the final results.

So as to provide some means of judging the degree of accuracy of the quantitative data obtained, it was decided that in a number of cases the garden or gardens cultivated by the household be visited and the various plots measured by pacing. Visits were also made to the Commodity Boards to check on figures relating to crop exports. Further, a number of checks was made of estimates relating to cash purchases at the local retail stores. The results of these

checks showed that in all 3 regions about 60 per cent of the informants were able to estimate the values of the variables checked to within plus or minus 25 per cent of the actual values, about 15 per cent under-estimated, mainly in the 50-100 per cent range, another 15 per cent over-estimated by 125-175 per cent, and 10 per cent over-estimated by over 200 per cent. There were no significant regional variations in these percentages. While these figures serve as an indication of the degree of reliability of the survey results, they should be interpreted with caution, for, when actual numbers are small, slight errors in the absolute values can lead to large percentage discrepancies between the actual and the estimated values. However, to the extent that this thesis has as its main objective the comparison of regional levels of living, this bias should, because the adopted field methods were consistently used throughout the whole survey, be approximately constant from region to region, and would thus be of little importance.

Assessing the reliability of the qualitative data collected is a much more difficult exercise. The problems surrounding the accuracy of attitude-statements, for example, are many and varied. As Oppenheim (1966, 117) has observed, generally there is a tendency in people to reply to questions on attitudes "in a particular way, almost independent of content". There is, for instance, a tendency to reply "agree" to items which the respondent considers socially desirable attitudes. There is also a general tendency to assent rather than dissent. Such tendencies or 'response sets' are particularly strong in conformist societies of which Tonga is a good example. There was no certain way of overcoming these difficulties in the course of the field-

survey. The best that the author could do was to try to remain alert to any situation in which inconsistencies might be apparent.

There is also another area of difficulty relating to attitude-statements which needs to be mentioned here. People are often not certain in themselves as to what their priorities are. They may, for example, want more material goods as well as preserving the anga-faka-tonga which often demands giving away of material goods; and if they have to choose between two, or more, alternatives, they may be hard-pressed to decide consistently in all cases. The choice may then depend largely on context rather than on prejudged principles. Again, there was no easy way of overcoming these difficulties, and the author simply had to 'keep his ears open' to any indication of inconsistency. General discussion of the topic(s) concerned often helped the author in assessing the degree of reliability of the answers given by the respondents.

In spite of these problems, it is here believed that the qualitative information obtained were sufficiently reliable for the purposes of this study. Moreover, since the questions asked and the questioning procedure adopted were consistently followed throughout the field-survey, measurement bias from this source should be fairly constant from region to region.

II.ii: COLLECTION OF DATA

Main household survey

Before the household sample survey was carried out, a pilot study was conducted in one of the villages in Tongatapu

in order to find out whether it would be practicable to collect the required information, to test the length of the proposed questionnaire, and to train a field assistant.¹

The pilot study showed that there were items for which it would have been difficult and time-consuming to get reliable data by questioning so that it was necessary to abandon altogether any attempt to collect details on them. It was found, for example, that it was of little use to question the villager on the yield of agricultural crops from his gardens as crops were generally harvested several times a week, or even daily, in small amounts and were not stored. Even if the amount consumed directly off the field was treated as negligible and that the greater part was stored, which was rarely the case, it was very difficult indeed to interpret answers measured in terms of basketful or sackful when none of these units was of standard capacity. It was also found, though not entirely unexpected, that it was practically impossible to obtain reliable information on the quantity and type of foodcrops from the household farm normally consumed in the household,² unless one actually measured the quantities. Moreover, a lot of the crops grown are seasonal so that even if it were possible to obtain the average quantity consumed, the seasonality of harvesting and consumption would, since most of the food crops do not keep for long, complicate the estimation of the average patterns of weekly consumption.

1 The field assistant was a schoolteacher and his job involved mainly the recording of straightforward details such as those on household size, age and household structures, capital assets, and assisting in measuring household garden plots and checking some of the Commodity Boards' records. He helped in about half of the Tongatapu survey and most of the Vava'u survey.

2 Hardaker (1970,14) also encountered this difficulty. He noted that the "measurement of subsistence crops consumed in the household presented severe difficulties".

As can be seen in the questionnaire (Appendix IV), a number of the questions asked for information of a qualitative nature, such as occupational preference rating, satisfaction or dissatisfaction with the land tenure system, awareness or otherwise of regional inequalities, and so on. This kind of information was often not readily given. It was, therefore, necessary in some cases to suggest some of the possible answers to the informant from which he would then select what was or were really applicable. Further, a number of the questions brought forth stereotyped answers, and it was thus necessary at times to discuss the particular topics in general terms in order to get the real view of the informant.

Although the base year period for the survey was the 1970 calendar year, it would have been well-nigh impossible to have obtained all the required information pertaining exactly to this period. The period of the field survey lasted from September 1970 to June 1971. The further back in time an informant is asked to recall details on activities which do not conform to relatively uniform patterns, the greater is the chance of his making significant margins of error in his estimates. Consequently, many of the questions asked in the questionnaire had to refer to the immediate past, and the required weekly or annual estimates were then calculated accordingly.

Contrary to popular experience, it was found in the course of the pilot study that an interview lasting from 30 minutes to an hour, the average period it took to complete one questionnaire, did not appear to result in any marked degree of 'interview fatigue' on the part of the respondent. This was, it seemed, due principally to the relatively keen interest shown by the informants, and the people in general,

in the survey,¹ an interest which seemed to be attributable largely to the high regard with which education is held in Tonga.² Apart from those questions which had to be omitted because they turned out to be impracticable to be applied in the survey, and from a few minor alterations and additions, the final questionnaire was essentially the same in content as originally drawn up. On the other hand, the phrasing (in Tongan) of a number of the questions proved inadequate so that some revision was necessary before the main survey was undertaken.

In carrying out the survey, the following procedure was adopted. The recognised head of the household,³ whose name

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- 1 This keen interest was not always advantageous in that, in a lot of cases, the author felt obliged to stay on after the interview and discuss topics which were of interest to the respondent and/or other members of the household, but which were of little or no relevance to the purpose of the survey.
 - 2 Education is highly regarded in Tonga, and a university graduate is always held in high regard. About two weeks after the author's arrival in Tonga to commence on the field work he was approached by an official of the local radio station for an interview over the air relating to his proposed field-survey. This interview, plus an article in the local weekly paper, did a lot to create considerable interest in the survey.
 - 3 In a household consisting of only 1 nuclear family (with or without kin), the husband is the recognised head. Where there are 2 or more nuclear families, the senior husband is normally the head, and in other types of household, the head is the most senior member, with males having seniority over females. Households in Tonga are identified by the names of the respective heads, and the household lists supplied by the 'ofisa kolo were lists of household heads.

was drawn in the sample, was contacted and the nature and purpose of the survey were explained to him. The questions on the questionnaire form were then put to him and his answers recorded. The wife was also asked to be present, if possible, and she helped in supplying details on a number of questions, especially those relating to ages, expenditure and customary obligations. As the author himself is a Tongan and speaks the language fluently, there was little difficulty in communicating with the informants.

Village and household case-studies

To provide further insight into the subject under investigation, three 'representative' villages, one from each region,¹ were selected for case-studies. The kinds of information collected in these studies included details on population size, age-sex structure, landholdings, major sources of income and employment, relating both to the village as a whole and to a number of selected households.

Household case-studies were conducted to obtain detailed information on daily income patterns, expenditure patterns, food consumption, and allocation of time (of the household head) to various activities, covering a period of 2 consecutive weeks. For this investigation, 6 households were chosen from each region. The selected households were those whose heads the author believed to be capable of faithfully recording the required information.

Finally, the data formally collected were supplemented to an important degree by careful observation, informal discussions and questioning. A great number of people of

1 See Figure 2.2.

different occupations and of differing age-groups, who were not included in the sample population, were questioned on various subjects. In many cases, this form of informal discussion and questioning was more successful than the formally structured questioning in providing insights into some of the relevant subjects.

Price imputation

As already defined, a household's level of living, in the context of this study, depends, to a very large extent, on the level and type of goods and services available to it during the period under investigation. Measurement of this level of goods and services, or of income, in a monetary or market economy presents few problems, since virtually every item has a monetary value attached to it. But in a subsistence or predominantly non-market economy,¹ such as Tonga, an attempt at such evaluation is confronted by a number of serious problems. Basically, the problems of income measurement arise from the presence of a large sphere of economic activity in which goods and services produced have no monetary prices or any other such consistent measure of value. The most valuable contributions to a discussion of these problems have come from those economists² who have actually worked in the field.

Probably the most contentious topic has been the validity

1 A subsistence economy is one in which few things have a wholly or even partly direct monetary value. Throughout this study, the term 'subsistence' is used interchangeably with 'non-market' or 'non-cash', or 'non-monetary'. The distinction between 'subsistence' and 'cash' production is outlined in Chapter 4.4.

2 For example, Deane (1948; 1953), Frankel (1953), O'Loughlin (1956), and Mukherjee (1962).

or otherwise of imputing a monetary value to the subsistence output. The arguments for and against the practice have been spelled out by the economists already referred to, and it would serve no further purpose to add to that discussion in this study. It will suffice only to outline briefly the viewpoint adopted and the method of price imputation employed in this study.

Although Frankel (1953, 29-55) has, with some justification, argued at length that to impute values to non-marketed production is meaningless, because the 'value' of a good to the indigenous people of an 'underdeveloped society' cannot be divorced from the social context in which the economic choice is made, the importance of income accounting is, as far as the purposes of this study are concerned, such that one 'cannot admit defeat'. Attempts must be made, and have been made, to measure income in underdeveloped countries.¹ To be sure, one can agree with Frankel that the use of income estimates as a means of comparing the welfare of individuals or nations can be disputed. But, together with other data, at least something can be said about the conditions of individuals or households in different regions or countries.

Bearing these and other considerations in mind, and remembering that any measurement in values terms of the non-monetary sector is to some extent arbitrary, an account of the specific methods adopted will now be given. The nearest concrete basis on which statistical data can be obtained is the net realised prices for the portion of produce which is sold. This involves two basic assumptions (ECAFE, 1951, 21):

1 National Income studies of some Pacific territories include those of O'Loughlin (1956) for Fiji, Fairbairn (1963) for Western Samoa, and Kolff (1965) for the Cook Islands.

- (a) That the retention of the greater part of the output was a choice, and that the producers would have bought that output if they had not retained it. Hence this output is being treated as the purchase by the producers in their capacity as consumers of their own produce.
- (b) That these purchases would be at the ruling market prices.

There has been some argument as to which of these two alternatives should be used for this kind of imputation. Should subsistence output be evaluated at the highest price at which he would have had to pay for it, if he had not produced it for himself? Fortunately, in Tonga, there was little divergence between these two prices. Thus, the average ruling market prices were used as the basis for price imputation of subsistence output which was consumed in the household or given away in fulfilment of various social obligations or payments in kind. For goods which never entered the market, the labour costs of production, valued at the current labouring wage in each region (approximately 10 to 15 cents an hour) was used as a basis for estimation.

Finally, there were goods which had been bought or had component parts which had been bought. Monetary values for these goods were imputed in the following manner: for purchased items, such as some of the agricultural and carpentry tools, values were calculated according to the current cost of replacement with new items at Nuku'alofa, the average life span of each item, and the fraction of life span already completed. Thus, if item A has had 5 years of its average total life span of 10 years, and it cost \$10 new at Nuku'alofa, then its current value would be \$5. For items which involved both cash and subsistence expenses, such as boats and houses, a combination of the two evaluation

methods were used.¹

II.iii: EFFECTIVENESS OF METHOD

It is useful to offer some assessment of the degree to which the method employed in a survey has proved successful, both in achieving the desired proportion of the population or universe under investigation and in obtaining a representative sample.

The number of households for which information was collected serves as a useful starting point for such an appraisal. It has already been shown in Table II.1. that the response rate was remarkably high in view of the random selection of households and especially in view of the transportation difficulties involved in getting to the more isolated islands and villages. The credit for this must be shared between the research worker and his assistant and the informants. Without the informants' willingness to co-operate the efforts of the author and his assistant would have been far less successful.

The completion of the questionnaire involved collecting a considerable body of qualitative as well as quantitative material. Qualitative material was more difficult to obtain, being comparatively more elusive. Because of this, care was taken to avoid using a form of questioning that would have encouraged respondents to assume views or attitudes which they in fact did not possess, but which they thought would satisfy the interviewer. The pilot study was of considerable value in this connection in revealing weaknesses in the

1 This method of price imputation is basically similar to that used by Lockwood (1971, 50) in his study of Samoan village economy.

Tongan phrasing of some questions. The author also received invaluable assistance on this, and other matters, from his assistant, who, as already noted, was a field recorder in both the 1956 and 1966 population censuses. Despite the difficulties involved, it is believed that the qualitative data obtained were adequately collected. As far as the quantitative materials are concerned, checks carried out on a few of them have suggested that on the whole they are of a moderately to relatively high degree of accuracy.

How closely the achieved regional samples resemble the total regional household populations can be seen by comparing some characteristics of those surveyed with returns from the 1966 census. As can be seen in Table II.2, the differences in the average sizes of sample households and those from the census returns are relatively small, as are the differences in the sex ratios in Ha'apai and Vava'u. But the disparity in the sex ratio for Tongatapu is too large to be considered a chance variation. What the actual reason for this discrepancy is, it is difficult to say. It is suggested, however, that part of the explanation may lie in the in-migration to Tongatapu that has occurred since the census date, plus the fact that one-third of the sample households were located in the Nuku'alofa area, the focus of the in-migration to Tongatapu.

The areal stratification used in the sampling procedure was purported to secure an adequate areal coverage of all the 3 regions and to increase the representativeness of the regional samples. Greater acquaintance with the regions in the course of the survey suggested that the households chosen formed a fairly representative cross-section of the total household universe in each region.

Table II.2: Household Size and Sex Ratio
- Survey and Census Results

Region	<u>Household Size</u>		<u>Sex Ratio</u>	
	Sample	Census	Sample	Census
Tongatapu	6.8	6.9	131	108
Ha'apai	5.9	6.4	103	97
Vava'u	5.7	6.1	104	102

Sources: Fiefia (1968); Field-surveys, 1970-71.

Against these advantages must be set the considerable cost of the work and some of the limitations inevitable in a 'preliminary' study such as the present one. Moreover, the study was essentially one in breadth of a relatively large number of households in a rather 'superficial' way, and thus lacks the virtues of the more intensive approaches.

APPENDIX III: LIST OF SUBREGIONS, VILLAGES AND HOUSEHOLD POPULATIONS

Tongatapu Sub-regions

<u>Far-Eastern (I)</u>		<u>Mid-Eastern (II)</u>		<u>Central (III)</u>		<u>Western (IV)</u>		<u>Urban (V)</u>	
Village	No. HH ¹	Village	No. HH	Village	No. HH	Village	No. HH	Village	No. HH
Afa	42	Beuloh Coll.	9	'Atata	25	'Ahau	26 (3)	Haveluloto	197 (14)
Fatumu	53 (3)	Folaha	89 (3)	'Eueiki	23	Fahefa	48 (3)	Kolofo'ou	952 (14)
Haveluliku	19 (3)	Fua'amotu	203 (6)	Ha'akame	56 (3)	Fatai	73	Kolofo'ou	552 (11)
Hoi	54 (3)	Ha'asini	46 (3)	Ha'alalo	39 (3)	Fo'ui	51	Ma'ufanga	305 (11)
Kolonga	207 (6)	Hamula	55 (1)	Ha'ateiho	150 (4)	Ha'akili	18		
Mu'a	481	Holonga	60 (3)	Halaloto	25 (3)	Ha'atafu	27 (3)		
Makaunga	44 (3)	Hu'atolitoli	11	Hofoa	61 (3)	Ha'avakatolo	43 (3)		
Manuka	20	Lavengatonga	48	Liahona	36	Ha'utu	32		
Navutoka	93 (2)	Longoteme	81 (3)	Siesia	19	Houma	188 (4)		
Niutoua	109	Malapo	68 (3)	Pea	107	Kala'au	14		
Nukuleka	41 (3)	Nakolo	46	Puke	30 (3)	Kanokupolu	44 (3)		
Talafo'ou	62 (3)	Nukuhetulu	42	Sia'atoutai	62	Kolovai	97		
		Pelehake	78 (3)	Tofoa	63	Lakepa	51 (3)		
		Toloa	30 (3)	Tokomololo	81	Masilamea	34		
		Vaini	254	'Utulau	57	Matahua	67 (3)		
				Veitongo	79 (3)	Nukunuku	156		
						Te'ekiu	56		
						Vaotu'u	67		
TOTAL: 1,225 (26)		1,120 (28)		913 (22)		1,092 (25)		2,006 (50)	

APPENDIX III (Continued)

<u>Ha'apai Sub-regions</u>				<u>Vava'u Sub-regions</u>					
<u>Main Islands (VI)</u>		<u>Smaller Islands (VII)</u>		<u>Eastern Vava'u (VIII)</u>		<u>Western Vava'u (IX)</u>		<u>Islands (X)</u>	
Village	No. HH	Village	No. HH	Village	No. HH	Village	No. HH	Village	No. HH
Fakakakai	67	Fonoifua	16 (3)	Ha'akio	30 (3)	Feletoa	55 (3)	Falevai	38 (3)
Faleloa	96 (3)	Fotuha'a	30	Ha'alaufuli	78	Holonga	70 (3)	Hunga	58
Fangale'ounga	40	Ha'afeva	69 (3)	Houma	33	Leimatu'a	166 (4)	Kapa	29 (3)
Felemea	63 (3)	Kotu	32	Makavē	56 (3)	Longomapu	83 (3)	Koloa	47
Fotua	42	Lofanga	55 (3)	Mangia	11 (1)	Taoa	53 (3)	Lape	8 (3)
Ha'auo	67 (3)	Mango	17 (3)	Mataika	73 (3)	Tefisi	73 (2)	Matamaka	19 (3)
Hihifo	13 (4)	Matuku	19	Neiafu	449 (12)	Tu'anuku	68	Nga'unoho	27 (3)
Holopeka	20	Mo'unga'one	39	Pangaimotu	61 (3)	Vaimalo	19	Noapapu	31 (3)
Koulo	49 (3)	Nomuka	129 (4)	Ta'anea	80			Ofu	45
Lotofoa	81 (3)	'Oua	42 (1)	Toula	28 (3)			Okoa	23
Muitoa	21	Tofua	32	Tu'ane kivale	63 (3)			Olo'ua	18
Pangai	219 (6)	Tungua	71	'Utui	45			'Otea	33
Pukotala	44 (3)			'Utulei	29			'Ovaka	30
'Uiha	113 (4)							Taunga	25
								'Utungake	34
TOTAL: 1,053 (32)		551 (17)		TOTAL: 1,036 (31)		587 (18)		465 (18)	

1 The first column of numbers in each sub-region are the numbers of Tongan households, in 1966, in the listed villages, and those in brackets are the numbers of households surveyed in this study's main household survey.

Sources: Fiefia (1968), Field-surveys, 1970-71.

APPENDIX IV: SOCIO-ECONOMIC SURVEY OF TONGA:

HOUSEHOLD QUESTIONNAIRE

Regional Code No. _____
Village Code No. _____
Household Code No. _____

DEMOGRAPHY

1 Type of Household:

Single person	_____	Simple family plus kin	_____
Bachelor(s)	_____	Married couple plus kin	_____
Spinster(s)	_____	Denuded simple family	_____
Simple family	_____	Denuded simple family plus kin	_____

2 Age-Sex Structure of Household Members:

Age-group	Females	Males	Age-group	Females	Males
0-4			40-44		
5-9			45-49		
10-14			50-54		
15-19			55-59		
20-24			60-64		
25-29			65-59		
30-34			70 & over		
35-39					

3 Occupation and Education of Household Members:

Member	Occupation			Education ^a			
	Type	Where	Redundant ^b	Prim'y	Secon'y	Tert'y	Where ^c

- Notes: (a) Length of education (in years) at highest level reached.
(b) Redundant: number that could be employed elsewhere if employment opportunities were available.
(c) Place where received highest level of education.

MIGRATION

- 4 (i) How long has this household lived in this village?
- Less than 1 year _____ Over 10 years _____
- 1-5 years _____ Lifetime _____
- 5-10 years _____

For households who have not lived lifetime in the same village:

- (ii) In what other places has this household lived and for how long, beginning with the most recent place before moving to this village?
- Place _____ years Place _____ years
- Place _____ years Place _____ years
- (iii) Does this household intend to remain permanently in this village?
- Yes _____ No _____ Don't know _____
- (iv) What was/were the reason(s) for the household's migrating to this village?
- Reasons (in order of importance): _____
- _____
- _____
- _____

- (v) Are there any members of this household who left this household or came into it during the past 12 months?

Sex	Age	Loss or Gain	Perm. or Temp.	Reason	Where

LAND

- 5 (i) What is the form of tenure, size and location of the town- and tax-allotments to which this household has access?

Form of Tenure	Town Allotment Tenure Size	Tax Allotment Tenure Size Location

Hereditary Estate

Registered tenure:

on govt. estate _____

on noble estate _____

Leasehold

Customary right:

on govt. estate

on noble estate

Temporary occupancy

by permission of:

govt. (town officer)

allotment holder

Other (specify)

(ii) Attitude towards the Existing Land Tenure System:

Do you consider the existing land tenure system to be a satisfactory one?

Yes

No

Reason(s) for answer given (in order of importance):

AGRICULTURAL PRODUCTION

6 Operation of the Farm Unit:

Who operates the household farm?

Head of Household

Other (specify relationship to household head)

7 Crop Production:

Main crop(s) grown in the household farm unit(s) during the year 1970.

Main crop(s)	Amount Grown acreage approx. yield per acre	Fallow Land acreage	Soil Type

8 Livestock:

During the year 1970

Category	No. of head young adult	Slaughtered No. value	Given away No. value	Sold No. Value
Horses				
Cattle				
Goats				
Pigs				
Fowls				
Other (specify)				

9 Farm Labour:

How much labour (weekly average) was employed in the household farm unit during the year 1970?

Indiv.Lab.	Relation to household head	Time (hrs)	Cost (where applicable)	Method of payment

10 What farm equipment did you use on the farm during the year 1970?

Type of Equipment	Ownership		
	Own - value	Borrowed	Hired cost
Bush knife			
Hoe			
Digging spade			
Axe			
Tractor			
Plough			
Other (specify)			

11 Did you use any items such as seeds, fertilizer, sprays, dusts, etc. on the farm during the year 1970?

Item	Frequency	Amount	How Obtained	Cost

- 12 Were you supplied with any fertilizer, dusts, sprays, pig-subsidy, etc. by the Copra Board, Produce Board, the Coconut Replanting Scheme, or the Department of Agriculture during the year 1970?

Item	Frequency	Amount	Value	Agency

- 13 What were the major limiting factors to increased production on your farm during the year 1970?

Limiting Factor(s) (in order of importance): _____

- 14 The Importance of Agriculture:

(i) How important is agriculture to this household as a means of livelihood?

Very important	_____	Not important	_____
Important	_____	Don't know	_____

(ii) How important is agriculture to the Tongan economy?

Very important	_____	Not important	_____
Important	_____	Don't know	_____

OCCUPATIONAL PREFERENCE RATING

- 15 (i) Would you rank the following occupations according to your own preference?

Occupational Type	Rating
<u>Agriculture</u>	
<u>Fishing</u>	
<u>Professional/White-collar</u>	
<u>Skilled (trade-skill)</u>	
<u>Self-employed/entrepreneurial</u>	
<u>Wage-labouring</u>	
<u>Other (specify)</u>	

(ii) Reason(s) for first preference: _____

INCOME

- 16 (i) What income was earned by household members who were/are full-time non-agricultural workers during the year 1970?

Member	Occupation	Where	Weekly earnings

- (ii) What work off the farm was done by the other members of the household during the year 1970?

Member	Type of Work	Where	Time (hrs)	Earnings

- (iii) What crop/livestock was sold from the farm during the year 1970?

Commodity	Quantity	Value	Where or to whom sold

- (iv) Were there any other sources of income during the year 1970? (e.g. from sale of possessions, remittances, etc.)?

Source of income	Place whence income came or obtained	Type	Amount

EXPENDITURE

- 17 (i) Food (average per week) during the year 1970:

Item	Quantity	Cost	Where bought or exchanged	Method of payment

- (ii) Farm needs (e.g. tools, seeds, fertilizer, etc.) during the year 1970:

Item	Quantity	Cost	Where bought or exchanged	Method of payment

- (iii) Other spending by the household (e.g. clothing, housing materials, school fees, etc.) during the year 1970:

Item	Quantity	Cost	Where bought or exchanged	Method of payment

- (iv) Goods^a given away by the household for various obligations during the year 1970:

Type of goods	Quantity	Estimated value	Type of obligation

Note: (a) Goods - all kinds of goods including money.

HOUSEHOLD POSSESSIONS

- 18 Does this household possess any of the following?
If yes, are they owned, on hire, or on hire-purchase?

Item	Yes	No	Owned	Hired	Hire Purchase	Value
Radio						
Telephone						
Electric Light						
Pipe water						
Water Tank						
Boat						
Car						
Truck						
Mower (Motor)						
Cart						
Other (specify)						

HOUSING

19

House			Outbuildings								
A1	A2	A3	A1			A2			A3		
			K	B	T	K	B	T	K	B	T
Type											
Quality											
Estimated value											

Notes: A1 - European
A2 - Semi-traditional
A3 - Traditional
K - Kitchen
B - Bathroom
T - Toilet

EXPOSURE TO MASS COMMUNICATION MEDIA

- 20 (i) How many times a week does this household read a newspaper?
_____ Times _____ Newspaper
- (ii) How often does this household listen to the radio?
Every day _____ 1-3 days _____
4-6 days _____ Never _____

ATTITUDE TO OR AWARENESS OF REGIONAL INEQUALITIES

- 21 (i) Do you consider that there are differences in the levels of living of the people in this group and those of the people of the other two groups?
Yes _____ No _____
- If so, would you like to see these inequalities reduced?
Yes _____ No _____
- If yes, what steps should be taken to reduce these inequalities?
Steps (in order of importance): _____

(ii) Are you satisfied with the life in this island group?

Yes _____ No _____

Reasons for the answer given (in order of importance): _____

(iii) Do you think that you can raise your level of living?

Yes _____ No _____

How or why (in order of importance): _____

(iv) What do you consider to be the more important factors limiting your achieving a higher level of living?

Factors (in order of importance): _____

ATTITUDE TO POPULATION SIZE

22 (i) Is this household over-populated?

Yes _____ No _____

(ii) Is Tonga over-populated?

Yes _____ No _____

(iii) What do you consider to be the optimal size for a Tongan 'api?

3 or less _____

4 - 6 _____

7 - 9 _____

10 or more _____

Some Explanatory Notes on the Questionnaire

A perusal of the Questionnaire would show that some of the questions included need some comments. Examples of such questions include part of Question 3, Question 5, Question 14, and so on.

- Q.1 This was a fairly straight-forward question, except that the terms single family and denuded family need defining here. A simple family simply meant an elementary family or family consisting only of parents and their children. A denuded family, simple or otherwise, was a family from which at least one member had left permanently.
- Q.2 There was no problem in administering this question, but there was some difficulty in some of the respondents' remembering the exact number of years they spent at the highest level of education reached. The term 'redundant' referred to the number of adult household members who were not students and who could be gainfully employed full time elsewhere (without greatly reducing the level of household output of goods and services), if there were employment opportunities available.
- Q.4 The length of residence of a household in a village was the length of residence of the household head. In general, when parents (or guardians) migrate permanently, they almost always do so with all their unmarried children. Temporary migration on the other hand, often involves only some of the household members; and such households are, in household censuses, nearly always enumerated in the village(s)

where they normally reside. Thus the question on the length of residence did not pose any real difficulty once the basis on which the length of residence was to be decided had been established. As for households consisting of only bachelor(s) or spinster(s), the length of residence was taken as that of the person or persons who first established the household.

Q.7 Very few farmers were willing to venture a guess on the approximate yield per acre; this section of the question was, therefore, left out. Fallow land meant land that was not being cropped. However, if a piece of land was planted in coconuts only, then, for the purposes of this study, that land was regarded as fallow land.

Q.10 This question was discarded in the survey. From the pilot study it was more than obvious that answers to this question would be highly inaccurate, for, in general, Tongans do not think in readily measurable terms with regards to the amount of kumala, talo or yam which they consume daily or weekly (see Appendix II.ii).

Q.14 This question appeared to the author to be a fairly straight-forward one, but, as it turned out, it required some explanation to a number of the farmers. The author even had to suggest some possible answers to some of them, from which they would then select the ones most applicable.

Q.15 This was a question that caused some difficulty in the field. While all the respondents knew what agriculture,

fishing and wage-labouring occupations were, quite a number required some explanation on the other categories. It was found advisable to let the respondents rank several jobs of his own choice according to his personal preference; this was then put into the appropriate categories on the questionnaire form.

Q.16 Section (i) of this question caused no problem.

Respondents, however, generally found it difficult to estimate the length of time spent on work off the farm when that particular type of work was done at irregular and infrequent intervals; the same applied to the estimation of earnings. In regard to (iii), it was interesting to learn that farmers generally had a pretty good idea of how much livestock they had sold and of the income derived therefrom, but not so with regards to bananas and copra. With bananas, growers generally remembered the cases they had exported but not the value (which, fortunately, could be easily worked out). With regards to copra, on the other hand, growers remembered fairly accurately the income they had obtained but not the quantity they had sold (which, again, could easily be worked out). Section (iv) presented no difficulty.

GLOSSARY

Of Tongan Words Used in the Text¹

<u>anga-faka-tonga</u>	....	the Tongan way of life
<u>'api</u>	....	household, home; allotment or area of land
<u>'api kolo</u>	....	town or village allotment
<u>'api tukupau</u>	....	tax allotment of farm land
<u>faingamālie</u>	....	opportunities
<u>fakaafe</u>	....	church feast
<u>fakamā</u>	....	shameful
<u>fakapisinisi</u>	....	businesslike
<u>fale</u>	....	house
<u>fale kaukau</u>	....	bath-house
<u>fale vao</u>	....	toilet
<u>fāmili</u>	....	family
<u>fatongia</u>	....	duty, obligation
<u>feleoko</u>	....	storage shed
<u>fonua</u>	....	country, nation
<u>fono</u>	....	village meeting
<u>ha'a me'a vale</u>	....	persons without title or chiefly rank, commoners
<u>hiapo</u>	....	the paper mulberry tree
<u>hou'eiki</u>	....	chiefs, nobles
<u>kainga</u>	....	kindred
<u>kautaha lalanga</u>	....	group of women weaving mats together
<u>kautaha koka- 'anga</u>	....	group of women making tapa-cloth together

1 The meanings given in this Glossary explain only those found in the text.

<u>kautaha toungaue</u>	....	group of men working together
<u>kautaha toutu'u</u>	....	group of men farming together
<u>kava</u>	....	<u>Piper methysticum</u>
<u>kelefatu</u>	....	clayey soil
<u>kole</u>	....	ask for, borrow
<u>kumala</u>	....	edible tuber, often referred to as sweet potato
<u>Māmonga</u>	....	Mormon Church
<u>misinale</u>	....	annual church collection
<u>matakali</u>	....	extended family
<u>matāpule</u>	....	lesser chief
<u>nōpele</u>	....	noble
<u>pola</u>	....	woven coconut leaves used for walls, roof of a <u>fale</u>
<u>Pule'anga</u>	....	Government
<u>siasi</u>	....	church
<u>talo</u>	....	edible tuber, taro
<u>talo tonga</u>	....	a particular kind of <u>talo</u>
<u>tofi'a</u>	estate
<u>tou'one</u>	sandy soil
<u>toutu'u</u>	group of men farming together
<u>tu'a</u>	a commoner

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